Outcome Specifications User's Guide

OUTCOME SPECIFICATION USERS' GUIDE

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OUTCOME SPECIFICATION USERS' GUIDE

I. INTRODUCTION. This guide is intended to help Center managers understand the concept behind the Outcome based specification and how to tailor it to their individual needs. The total Outcome based guide package provided includes:

- A users' guide (This document)
- A guide specification (outcome oriented)
- A guide QA plan for Outcome Monitoring
- Recommended Proposal Requirements and Evaluation Criteria

II. OUTCOME BASED SPECIFICATION CONCEPT

A. Design Features. The Outcome based Guide COSS contract represents a significant departure from the traditional structure and approach to specifying work requirements in Performance Statements of Work. Based on feedback from both the contracting community and Government facility managers, it has been designed to emphasize results and outcomes and draw on the expertise of contractors to determine how to achieve those results. Contractor flexibility is increased and attention is devoted to managing the work. Government oversight is decreased and attention is devoted to managing performance results. It also incorporates a Contractor - Government Partnering process to achieve mutually supportive goals.

A description of the major contract design features, the reasons they were incorporated and the benefits to be obtained are summarized in the following paragraphs.

1. Outcome Requirements

a. Description - A traditional Performance Based Contract (PBC) identifies performance requirements as "Outputs" or work tasks, such as performing preventive maintenance or cutting the grass weekly. An outcome-based specification can still be considered a performance based contract, but with requirements stated as outcomes, or results instead of outputs or work tasks. The outcome specification requires the Contractor to achieve end results such as an equipment reliability level or grass not exceeding a certain height. By contracting for outcomes directly, the Government will be allowing contractors to decide what work tasks are needed and propose technologies and techniques that may be more effective than traditional approaches. The traditional packaging of services is changed in order to formulate meaningful high-level outcome requirements. For example, an outcome requirement that "buildings are available and fully functional to the user when needed" integrates all service necessary to produce that result. Traditional packaging had discrete specifications and evaluation criteria for building O&M, HVAC O&M, elevator O&M, pest control, and the like. Outcome-based specification integrates all contributing services into the requirement.

The outcome approach is a relatively new concept and is not appropriate for all functions. Because certain functions and systems are so critical to the mission of the Center, a combination of output and outcome requirements may be most appropriate. For example, the Contractor may be required

to perform specific preventive maintenance tasks in accordance with a standard NASA checklist for certain critical systems and equipment. For other functions, such as operations of building systems, the Contractor has the flexibility to propose a plan that will result in required system outputs and service availability. Further understanding of this concept can be gained by reading the guide Outcome Monitoring Plan provided in the Quality Assurance Guide. The recent Joint Base Operations Support Contract (J-BOSC) for the Kennedy Space Center and Cape Canaveral Air Station incorporates a combination Outcome and Performance based Statement of Objectives.

b. Expected benefits - Improved quality and lower costs from best industry practices and technologies. Lower quality assurance costs from monitoring results instead of tasks.

2. Government and Contractor Shared Responsibility for Facilities Condition and Reliability

a. Description – The pricing method for work categories is structured so that the Government and the Contractor have a shared responsibility for facilities condition and reliability, and ultimate achievement of the contract goal. The structure rewards the Contractor for proactive and effective operation and maintenance while limiting cost responsibility for major failures. Repairs and corrections of failure and malfunction (Trouble Calls) up to a certain cost limit per task (suggest $2,000 but set based on analysis of historical data) are fixed-price with no limit on number of calls. The Contractor remains responsible for the cost limit when the total cost of correction and repair exceeds the limit. This pricing strategy gives the Contractor an incentive to develop and perform a pro-active and effective operations and maintenance program. For larger repair jobs, the Contractor's responsibility may be increased if the repair is a result of a failure to perform proper Preventive Maintenance (PM) or Predictive Testing & Inspection (PT &I). See the Building OM&R Technical Section for details. The cost responsibility limit provides a reasonable risk sharing between the Government and the Contractor. The Contractor could realize a greater profit and the Government experience fewer failures from an effective program of operations, PM and other maintenance techniques such as predictive testing.

b. Expected Benefits - Reduced disruption to Center mission operations caused by facility problems and failures from more effective maintenance. Improved occupant comfort and greater resource conservation from more effective operations. Lower costs from use of industry methodologies and technologies. Lower costs from shared responsibility with Contractor.

3. Quality Assurance of Outcomes

a. Description – The outcome based contract concept suggests that the traditional work monitoring evaluation process and the use of payment deductions is in conflict with the overall partnering and results oriented approach in an outcome specification. Instead, monitoring of outcomes and trends should be the preferred and primary method of surveillance by the Government. The Government and Contractor are expected to mutually agree to critical success indicators linked to the specified results. Monitoring of these results over time is expected to gauge the success of the Contractor’s plan and execution capabilities. Only in the event that this approach proves unsuccessful will the Government consider use of traditional performance monitoring and possible use of payment deductions. Success of this approach relies heavily on effective application of evaluation criteria during the contractor selection. There must be strong joint commitment to the terms of the Partnering Agreement. Further, the Contractor must have an

aggressive quality control program with the commitment to identify and promptly correct root causes of poor results.

b. Expected Benefits - Significantly lower QA costs. Improved assessment of what really matters - results. A cooperative relationship between the Government and contractor featuring full and open communications. Conversely, the probability for adversarial interactions is significantly reduced.

4. Partnering

a. Description – The outcome based contract includes a partnering process which is designed to create an agreement between the Government and Contractor to work cooperatively as a team, to identify and resolve problems and to achieve mutually beneficial performance and result goals. It is more than a handshake. It contains specific binding processes for conflict resolution and a team approach to achieving contract goals. The COSS guide provides further detail on the partnering process and specifics on agreements and conflict resolution.

b. Expected Benefits – Achievement of contract goals. Lower contract administrative costs. Improved problem solving and fewer conflicts.

B. Solicitation and Proposals. The following suggests a structure for both the Government's Request for Proposals and Statement of Objectives (SOO) and the Contractor's submission of a proposed Statement of Work (SOW):

1. What the Government will give to proposing Contractors:

a. Section C that will include:

- Broad overall contract objectives and outcomes
- Outcomes - broad statements of goals for each technical section.
- Scope - explanation of boundaries of work covered by annex (e.g., SF, number of pieces, quantity generated, population served)
- Indicator - measurement of performance for each outcome
- Minimum standard for each outcome
- Workload Data - provided for information only, since data is based on current methods
- Mandatory requirements - references, personnel qualifications, etc., that must be followed
- Documentation Requirements

b. Format Guidance

- Statement of Work
- Technical Proposal
- Cost Proposal format, including Business Cost Model (BCM) spreadsheet

2. What the Government will get from proposing Contractors

a. Statement of Work. (SOW) - The Contractors proposal of "what" should/will be done to meet the identified objectives. This will be incorporated into the awarded contract and made contractually binding. The SOW *should* include:

- Work Breakdown Structures – "what" they propose to do (work tasks)
- References and Standards they will follow and observe
- Reports and deliverables they will provide
- Qualifications of personnel they will use

b. Technical Proposal (TP). - As in past procurements, this proposal *should* describe how they will achieve the objectives. The difference under outcome-based contracting is that they will be describing their methodology in support of the "what's" that they have identified in their SOW. In the technical proposal, they can describe proprietary and/or innovative methods for achieving the desired goals. Recommended Proposal guidance is provided in Attachment A.

c. Cost Proposal - Their completed BCM spreadsheet, narrative explanations of cost elements: labor, travel, equipment, materials, indirect costs, overhead, subcontracts, award fee.

3. Contingency Operation. It is expected that "Steady- State" conditions will prevail for most of the time of contract duration, however, it is also known that there is a possibility of sudden changes in mission requirements, such as launch "scrubs" and emergency testing, and natural disasters, including severe storms. Proposing Contractors are required to provide contingency planning that will be implemented in such an event, and to provide production capacities for these conditions. In the Technical Proposal, the Contractor will identify the operational increases and decreases, by types of work and maximum and minimum levels supported without changing pricing for various scenarios.

4. Award Fee. For fixed-price work in this project an award fee may be of value to incentivize the proposor to remain keenly aware of and responsive to NASA's desires. The intent is not to reward for performing work well, or even meeting outcome objectives, but for demonstrating those attribute**s** that contribute to contract effectiveness. These include cooperation, flexibility, and technical and management ingenuity with external benefit. If a Cost Plus pricing method is chosen, however, due to uncertainty of data, then an award fee is also appropriate based on the above factors as well as meeting outcome objectives.

In making an award fee judgement, this guide suggests that quantifiable outcome data be used by the Award Fee Board, but that the ultimate percent (%) fee decision is still an subjective one based on how meaningful the outcome results are to the Board**.** Suggested award fee evaluation criteria and process is provided as Attachment B.

C. Solicitation Structure. The Uniform Contract Format as used in the performance based specification should be followed. Section C, Description of Work, will contain the Government's Statement of Objectives (SOO). A recommended structure for Section C. is shown in Attachment C of this guide.

III. TAILORING THE GUIDE STATEMENT OF OBJECTIVES

A. General Guidance. The following issues and guidance are provided to assist the contract development team.

1. Outcome Versus Output Decisions. The creation of the Outcome Specification Guide with statement of objectives does not imply that any one Center/Installation should contract all functions in an outcome specification format. On the contrary, the outcome guide is meant to supplement the COSS performance based specification guide to allow for the most effective mix of performance and outcome requirements as part of the contracting strategy for each NASA Center/Installation. For that reason, each technical section of the guide includes both an outcome requirement and the opportunity to identify an output requirement. The use of output requirements is suggested where:

a. The Center feels that the criticality of the function is too important to allow a Contractor to deviate from proven work methods.

b. There is a mandated regulation or operational procedure which requires a specific work method be followed.

c. A mandated requirement should improve Safety.

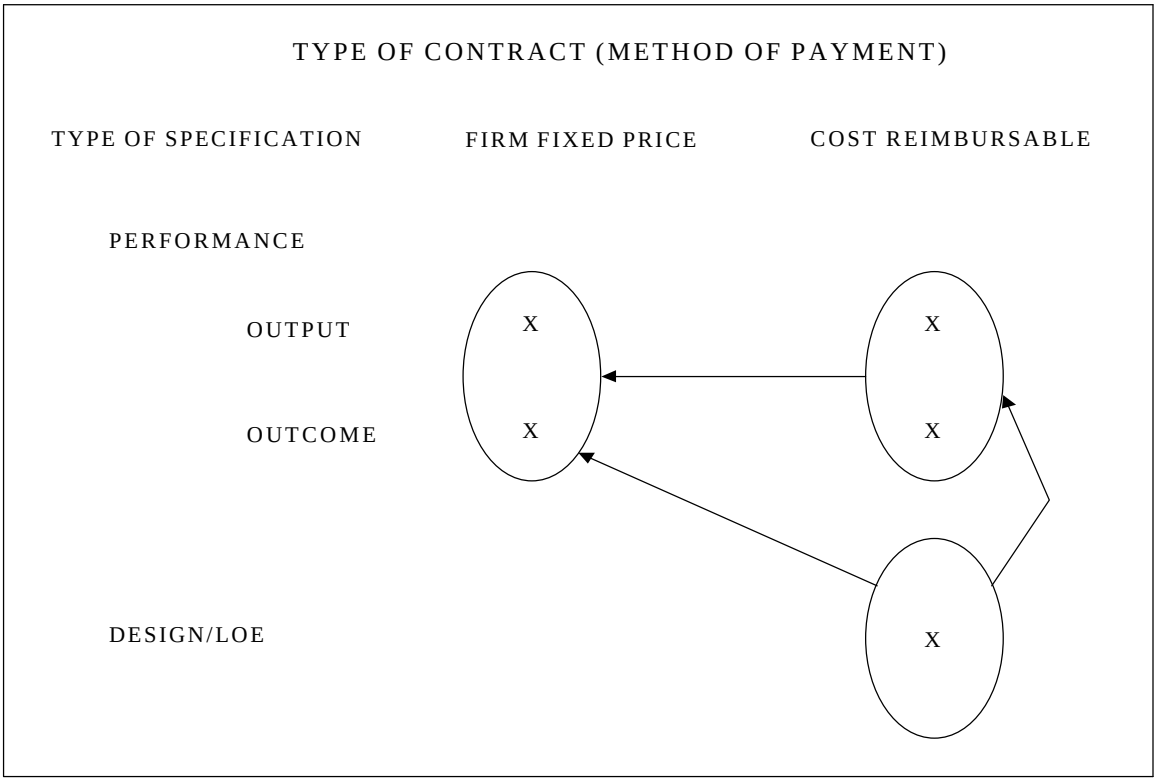
d. The function has very high visibility and a proven methodology has provided excellent results in the past.

2. Use of Metrics. The outcome specification requires that a standard of performance for the Contractor to achieve be identified, very similar to the standard of performance concept used in the output specification. As an example, the outcome specification may require the Contractor to achieve equipment availability. That is an outcome requirement. The metric or indicator associated with that requirement is percent (%) availability. It is a measure of the performance. The percent (%) availability number that the Contractor must achieve is the standard. How will the Center/Installation know what standard to require? In order to set a standard, the Center must have a good sense of what current baseline performance is based on known metrics. Unless these metrics are known, there is no rational basis for which to require a standard and the use of the outcome specification may not be justified.

3. Customer Communication. The customer is accustomed to man-years of personal service. Changing to a performance specification is traumatic. Changing to an Outcome specification is even more traumatic. Communication with the Customer is critical. This includes an explanation of what an outcome specification is and how the customer can help in the QA process.

B. Bid Structure. In the performance output specification guide, work is bid lump sum for fixed-price work with estimated quantities and unit prices for indefinite quantity work. This is a reasonable bid structure approach because quantities of work, such as number of trouble calls and equipment to be PM'd are well known and identified to the bidders. In contrast, the outcome specification presents both added risk and opportunity to the Contractor, which must be reflected in

the pricing structure. The following diagram illustrates possible options for selecting the payment method most suitable for the outcome specification. It also suggests that the offerors contract can be a hybrid both in terms of including outcomes and outputs and also be a mix of fixed-price and cost plus method of payment. This outcome guide is structured as a Fixed-Prices contract and recommends that form of pricing as being most effective and of best value to the Center. This diagram also represents the various approaches taken by different Centers in departing from the



traditional cost plus contracts of the past while striving for a performance based approach.

The arrows illustrate how some Centers went directly from a Design Specification format to Performance Fixed-Price, while others went to a Performance Cost Plus structure first and then intend to transition to fixed-price later. Both approaches are valid and lead to the desired end result.

From this diagram, the following precepts apply:

1. A performance based contract can contain both output and outcome requirements.
2. A performance based contract can have both fixed-price and cost reimbursable payment methods within the same contract.
3. A design specification or one which requires a specific number of man-hours (Level of effort – LOE) is not a performance oriented specification and is typically used with a cost reimbursable contract type.
4. A Center/Installation can move from a design/LOE based contract to a performance based contract using cost reimbursement and then to a fixed-price or the Center/Installation can move from a design/LOE based contract straight to a performance based fixed-price contract.

The following bid structure guidance is provided:

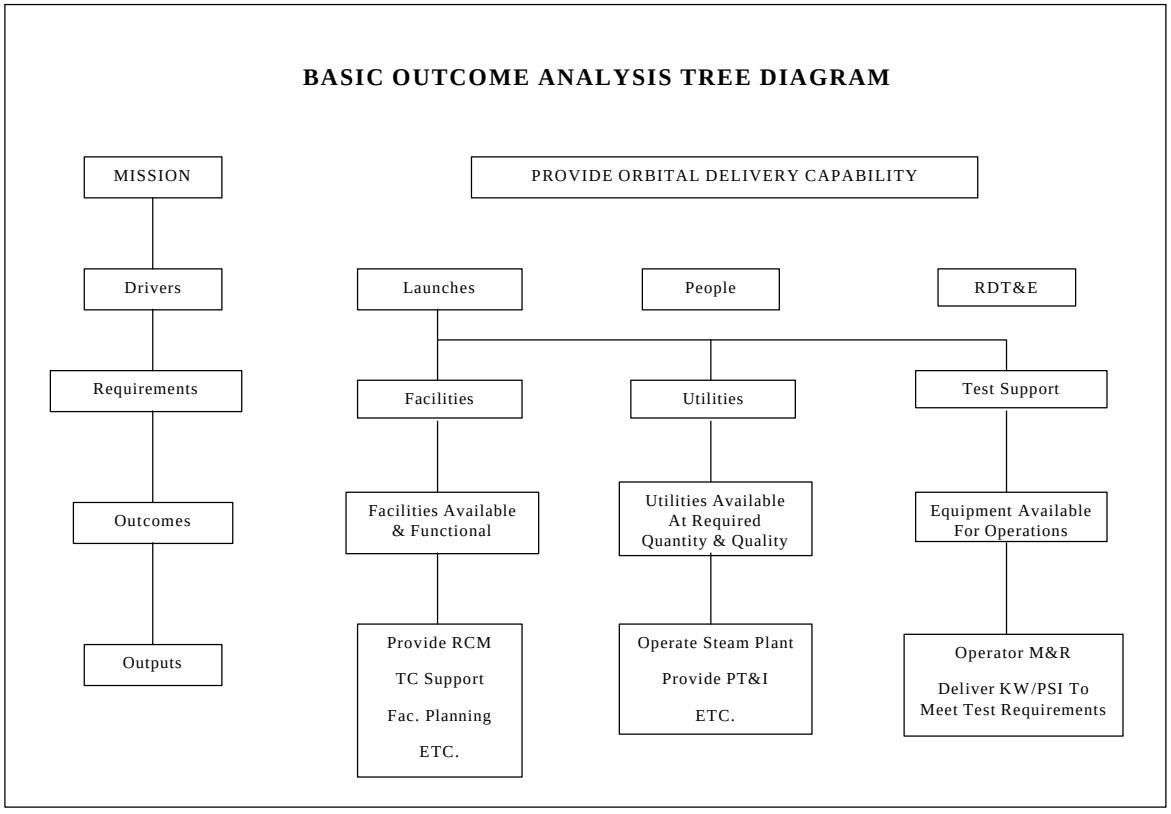
1. Maximize the use of fixed-price form of payment where the output or outcome can be clearly defined along with standards. i.e. Contractor bids one Lump Sum amount to achieve the fixed-price work portion of the specification.

2. Use a cost reimbursable bid structure only when the output or outcome cannot be defined in advance or there is no prior experience data to provide a reasonable risk to the Contractor.

Example. Provide support to lab personnel during experiment operations. Where possible – Buy Services, "not" bodies.

3. Pre-pricing Delivery Orders. Normally, work which is of an indefinite quantity type is bid by pre-pricing trade hours or with unit prices for work tasks such as $/SF for painting. It can also be bid as a coefficient to be applied to a standard such as R. S. Means estimating guides. If however, the Center/Installation has pre-defined work packages, these packages can also be bid Lump Sum Fixed-Price just as if they were contracted for independently. The competitive bid will assure the lowest price and avoid future negotiation.

C. Functional Analysis. What is the Government contracting for? This is the key question to ask as the development team tailors the outcome specifications. The heart of both the performance based specification guide (COSS) and this outcome based guide is the work breakdown structure (WBS), also referred to as a functional analysis.



The functional tree diagram above (*Basic Outcome Analysis Tree Diagram*) illustrates the thinking process involved in arriving at the proposed outcomes in this guide. The Mission is the prime objective. Drivers are those factors that determine the magnitude of the requirements. Requirements are those elements that will dictate Outcomes. Outcomes will dictate Outputs or Work Tasks. It also shows how outputs support the outcomes and how outcomes ultimately support the mission of the Center. The outcomes suggested in the guide are at a WBS level intended to provide a reasonable sharing of risk between the Government and the Contractor. In tailoring the technical sections of the guide, the development team should create its own functional analysis diagram and either confirm or modify the proposed outcome objectives in the guide. At the same time, the team needs to decide if any supporting work tasks (outputs) need to be mandated.

D. Technical Specifications (Section C). The technical section C is a Statement of Objectives (SOO). Attachment D is the recommended functional packaging used in this guide. Each technical section has been formatted in a uniform way to provide the proposing Contractors with sufficient information about outcome requirements to propose their Statement of Work (SOW) methodologies. Each Technical Section provides users' notes with specific guidance for tailoring that function. An explanation of the general technical section format found in Section C should aid the user in making modifications and adapting the guide to the Center's unique requirements:

1. Objective. This is a broad statement about the overall objective of the function. It is stated as a desired overall outcome or result.

2. Requirements. The Requirements paragraph provides a scope of work to tell the proposer the nature of the work and systems involved. It may require referring to a data pack in Attachment J.

a. Outcome Requirements. A major subset of paragraph 2 is the Specific Outcome Requirements section. These requirements are stated in a requirements table very similar to the Performance Requirements Summary (PRS) table in the COSS Guide performance output specification. The outcome requirements table consists of a reference number, a contract requirement stated in outcome terms, an indicator and a standard.

(1) The Requirement column is determined from the Work Breakdown Structure (WBS) and consists of a functional verb along with a desired outcome or result. The user should validate or modify the requirement based on the unique WBS for the function at the user's Center.

(2) Indicators are how outcomes are defined and measured. The guide suggests indicators for each Outcome. If the Center now uses other indicators more effectively, they should be used instead of or in addition to the suggested ones.

(3) The Standard- The standard is the quantifiable level of performance. Keep in mind that the standards shown in the guide are only examples. Each Center must establish its own standards based on past performance, criticality of function and current operational demands.

b. Output Requirements. When specific work tasks must be performed, the user will insert them in this section. Keep in mind that the Government assumes greater responsibility if it

requires a work task and the desired outcome is not achieved. The format for required work tasks is the traditional PRS where the requirement is the task to be performed (the output), the indicator will normally take the form of timeliness, quality procedures or documentation metric, and the standard a quantifiable measure for the indicator. (See the COSS Guide PRS for examples).

3. Contract Pricing. This matrix specifies how work will be paid; Fixed-Price, Indefinite Quantity Delivery Orders, Cost Plus, etc. Recommendation is to maximize fixed-price work including known Delivery Orders.

4. Definitions and Acronyms. Attachment J of the SOO will contain the most common definitions and acronyms. This paragraph is intended to identify any definitions unique to the function in that technical section.

5. Current Situation. This paragraph should provide the Contractor with an understanding of the magnitude, complexity, criticality and other significant factors that affect work performance. It is appropriate to describe in this section the current performance methods and procedures that are used and staffing now employed. The Contractor is not expected to adopt these methods but the information may be useful in designing creative approaches. This paragraph also references workload data and inventories provided in Attachment J.

6. Records, Reports and Deliverables. Although Attachment J will have a section for required reports and records, this paragraph can describe the requirements in greater detail. The Contractor is also expected to offer additional reports and records as part of the Statement of Work proposal.

7. References. The Contractor is naturally expected to comply with all applicable laws and regulations governing contract operations; however, this paragraph should specifically reference those requirements, directives or other regulations which are unique to the function and the Center.

E. Proposal Requirements and Evaluation Criteria. Specific proposal preparation instructions including suggested proposal requirements are provided as Attachment A. The Management section requirements include use of ISO 9001 quality factors. The Technical section requires more tailoring by the Center and could include such items as presenting specific problem situations and requesting the proposing Contractors to explain how they would react to them.

Attachment E provides a recommended Source Selection Plan (SSP) including evaluation guidelines and determination of Best Value.

F. Partnering Concept and Clauses. A Partnering Agreement is considered one of the key factors to the success of the outcome specification concept. Details on the this concept, along with recommended contract clauses, a sample partnering agreement, progress meeting agenda, along with conflict resolution procedures, are provided in the COSS Guide - Concept of Operations Manual .

IV LESSONS LEARNED

A. Experience to Date. The use of the outcome specification is relatively new and therefore lessons learned are limited. The outcome specification concept appears to have begun with the Air Force as part of a 1995 procurement initiative called project "Lightning Bolt". The original use centered on procurement of systems as opposed to services, but the basic concept used was identical to the process discussed in this guide. The Navy also embraced this concept and applied it to a very large multiple installation support services contract for Naval Activities on the island of Guam. That contract is scheduled for award in early 1999. The only active outcome oriented specification known at this time is the Joint Base Operations Support Services Contract (JBOSC) at the Kennedy Space Center. This contract is a mix of outcome and output requirements and is cost plus award fee. As various Centers/Installations transition from the design and level of effort specification to a performance one, they should give serious consideration to consulting with counterparts at Kennedy and the Navy to learn of potential benefits and pitfalls. The following represents latest feedback from KSC, Navy, and private industry.

B. Suggestions from the Field. Suggestions listed are not attributed to any specific source but are a composite of the above agencies:

1. Work Breakdown Structure (WBS). Leave the WBS open for the Contractor to propose. Specifying a WBS will only result in the same WBS. Requiring a WBS from the proposing contractors will also indicate the degree of their understanding of the work.

2. Performance Requirements Summary (PRS). The Contractor's Statement of Work (SOW) must include a PRS. The suggestion is to provide all proposing Contractors with a specific format for the PRS, otherwise the proposal evaluators may receive various interpretations of what a PRS is. The format should clearly explain to the proposer the difference between the work requirement or task, the indicator (Timeliness, Quality, Procedures, Documentation) and the standard of performance. Provide an example to the proposing contractors in the RFP guidance, Section L.

3. Evaluation Criteria. Criteria to evaluate the Contractor's understanding of the requirements needs to be improved. One Center raised the issue of bringing in outside help, including consultant support for the evaluation process. (Editor's Note - See recommended evaluation criteria for Section M as Attachment A to this guide).

4. Quality Assurance. Start Quality Assurance planning after RFP release or sooner. (Editor's Note - It is recommended that QA planning be started concurrent with specification development. Outcomes you require in the specification are the same outcomes you will track as part of an outcome monitoring plan.)

5. Costing. One interesting variation suggested involves telling the proposing Contractors the dollar limit available for the contract including award fee and ask the Contractors to suggest innovations to meet outcome requirements within budget constraints.

6. Data Collection. An outcome oriented specification may reduce the Government effort in writing a SOW, but the inventory of equipment and collection of historical data remains as a major

work task. Recommendation is to hire a contractor to get that data. Some firms even have the capability to produce a CD ROM display of both visual and tabular data to fit the specification requirements.

NOTE - A more in-depth discussion of the outcome experience has been documented by the KSC and Patrick Air Force Base JBOSC procurement team. A copy of the unsigned document is provided as Attachment F to this guide.

C. Private Industry Perspective. To a large degree, the feedback received from the Contractor community regarding the outcome specification concept is positive. General comments and issues identified to the authors of this guide, as well as feedback from pre-proposal meetings, include:

1. Requirements Description. In order to design an effective SOW, the Contractor must be given a good physical description of all the realities that bear on the mission requirements. This includes good workload data and meaningful performance outcomes.

2. Traditional Government Quality Assurance. Look to the Contractor for an evaluation of end services versus Government performance of traditional performance monitoring. (Editor's NOTE - This is consistent with the outcome monitoring plan concept proposed in our QA guide)

3. Outcome Concept Freedom Versus Government Regulations. The issue here is that the outcome concept supposedly allows the Contractor to design and propose more effective methodologies to achieve the desired outcomes that support the Center/Installation mission. In the same breath however, the Government imposes or cites a multitude of directives that prescribe conformance to set procedures or methodologies. The recommendation from the Contractors is for the Government to clearly identify which directives are statute and which are Guides, and that guides are not requirements. Make it understood in the RFP that the proposer is encouraged to identify any regulatory constraint which is impeding process improvement and for which waivers should be pursued. In short, do not contract for ingenuity and then require conformance to traditional procedures.

4. Cost Drivers. The Government needs to do a good job in identifying the significant cost drivers that impact service requirements. This includes such factors as Center population, power and other utility demands, operations demands, fluctuations in drivers and projections during the contract term. (Editor's NOTE - If cost driver projections are unknown or very uncertain, then a Cost Plus Fee contracting approach may be warranted versus creating an unreasonable fixed-price risk on the Contractor.)

5. Time. Develop the Draft RFP a full year before the advertisement. Allow access to the Center to witness operations and analyze data. Allow more time for SOW development.

6. Risk Sharing. Contractors are willing to share in reasonable risk where they have influence over that risk. For example, the Contractor may be responsible for X % of a repair cost if the repair was caused by Contractor failure to perform proper PM or PT&I. If a Contractor has confidence in performing an effective PM and PT&I program, then the risk of monetary loss is minimal. Do not establish Contractor responsibility for results where there is minimal Contractor control over those results. Another aspect of risk is the amount of work or outcomes costed as Fixed-Prices versus those outcomes costed as Cost Plus. Contractors are willing to accept a Fixed-

Price costing where they have control over the outcome. See the editor's NOTE in Paragraph C.4. above.

ATTACHMENT A
REQUEST FOR PROPOSAL GUIDANCE

SECTION L . xx PREPARATION OF PROPOSALS - GENERAL

The offeror shall submit proposals in two volumes titled as Volume I - *Mission Suitability and Past Performance Proposal* and Volume II - *Price Proposal*. !INSERT NUMBER! copies of each volume shall be submitted. Each volume shall be contained in a three ring binder. Volume I shall not exceed !INSERT NUMBER! pages. The page limitation does not include table of contents, dividers, resumes, Quality Manual, ISO 9000 registration documentation, active/completed contracts list, and paragraph D.1.e., *Safety Data*. Any pages in excess of !INSERT NUMBER! will be removed from the proposal without being evaluated and will be returned to the offeror. No material may be incorporated by reference. The Volume II is not page limited; however, it is strictly limited to applicable information. Information in Volume II that can be construed as belonging in Volume I will be so construed and will be returned to the offeror without being evaluated.

The proposal text shall be printed on both sides of 8-1/2" x 11" paper using no smaller than a 12-point font (one sheet of paper printed on both sides shall count as two pages). Foldouts no larger than 11" x 17" may be used as appropriate for illustrations and charts. Foldouts shall be printed on one (1) side only and shall count as two (2) pages. All pages must be numbered.

In order to reduce redundancy in the proposal, the offeror may reference another section in the proposal rather than duplicate the information in more than one location; however, consistency in the logical flow of the subject matter must be maintained.

Where use of subcontractors is proposed, the proposal shall clearly distinguish between the prime contractor's and the subcontractor's work and responsibilities.

Proposals must clearly respond to the requirements of the RFP and must consolidate information to the extent practical under each area discussed. Your proposal must be signed by an official authorized to bind the company.

SECTION L-xx SPECIFIC PROPOSAL PREPARATION INSTRUCTIONS

Volume I - Mission Suitability

Section I - Management

1. Describe your management approach and how it supports accomplishing the work described herein. Describe your proposed organization sufficiently to enable the evaluators to understand the proposed structure, staffing, distribution of authority, and distribution of work functions.

2. Identify and provide resumes in attachment L-x format for no more than !INSERT NUMBER! key management and technical personnel. Include evidence of the individual's commitment to work for your organization if not a current employee. For proposed key positions which you have not identified a specific employee, state the qualification for the position and the recruitment approach you will use to fill it. For each key person, indicate how the individual's background, education, and experience qualify him or her for the position.

3. Identify and discuss the management systems to be used Describe how they will contribute to contract accomplishment and provide status and other information to the Center. Describe how resources, including labor, will be managed and deployed to meet workload requirements.

4. Discuss the functions that will be subcontracted, and illustrate how you will recruit and retain qualified subcontractors and manage their performance. Describe how you will achieve and maintain the small and disadvantaged business subcontracting requirements of the RFP. Discuss your approach to labor relations and illustrate how your approach has been effective.

5. Describe your approach for achieving full contract capability on !INSERT DATE OF CONTRACT START**!**. Show how you will ensure the necessary staffing, equipment, materials and management systems will be in place.

6. Describe your quality approach. Discuss how the organizational structure, processes, procedures, and resources will be applied to implement quality management in all areas of the contract. Specifically address the following:

(1) Quality System - Discuss how your company provides and maintains an effective, up-to-date, documented system that defines quality, including a methodology to evaluate and document consistent conformance to the performance standards of Attachment J-E1. Provide a copy of your Quality Manual, if developed (does not count toward the page limitation).

(2) Corrective Action - Discuss your company's procedures for detecting causes of non-conformance, initiating corrective actions, controlling their implementation, verifying their effectiveness, and documenting procedural changes to prevent reoccurrence.

If your company is ISO 9000 certified, provide specific information related to your registration (does not count toward the page limitation).

C. Section II - Technical Performance

1. Describe your system(s) for receiving, validating, scheduling, controlling, and tracking work. Describe your approach for assuring that qualified personnel will be provided for each contract work requirement. Describe how your infrastructure maintenance activities will affect systems availability, reliability, and costs. Discuss how your operations will safeguard Center resources, focusing on safety, security, and the environment.

2. Discuss proposed interactions with the Center and describe how scheduling, status, cost, and other pertinent information will be provided.

3. Include an analysis of the technical risks associated with the electrical and mechanical systems and discuss how those risks will be managed.

D. Section III - Past and Present Performance

1. Submit the requested information in the following order:

a. Provide a short overview of your past performance history

b. Provide a concise discussion of any awards, certifications or special recognition including the date.

c. Provide a list of active or completed contracts during the last three (3) years. This list shall only include the offeror's contracts or subcontracts greater than $1M annually. For this list, include the contract name, contract number, brief description and points of contacts with their phone numbers. Asterisk contracts you consider relevant to this RFP. This listing does not count toward the page limitation.

d. Provide a list of any contract(s) terminated within the past five- (5) years for other than convenience of the government. If none, so state.

e. Provide copies of Bureau of Labor Statistics log and summary of Occupational Injuries and Illnesses (OSHA Form 200) for the past three (3) years. This information does not count toward the page limitation.

f. Provide references on no more than !INSERT NUMBER! relevant contracts, active and underway for a minimum of 12 months or completed within the last three (3) years. Relevant contracts are defined as base operations and support contracts for government or non-government organizations. The government will focus on information that demonstrates quality of performance relative to the size and complexity of the procurement. For each reference provide a brief description of the scope of the contract and state why the contract is considered relevant. Offerors should identify problems, weaknesses and/or deficiencies in the performance of the contracts given as references and the processes, corrective actions or method of problem resolution used to correct the weaknesses or deficiencies. For each reference provide the following information about each contract using the following format:

NO.	INFORMATION REQUIRED	INFORMATION SUBMITTED (replace sample inputs)
1	Name and address of contracting activity to which service is/was provided	Name and address of government or commercial entity
2	Contract number	1234567890
3	Contract title	Base Support Contract
4	Contract type	Fixed-Price with Award Fee
7	Original contract amount (OCA) and current (or ending) contract amount (CCA). Explain the reasons for any difference	OCA $5M, CCA $6M,
8	Contracting activity officials' names, telephone numbers	Ms. Jones, (000) 000-0000
9	Program/Project managers' names, telephone numbers	Mr. Smith, (000) 000-0000

NO.	INFORMATION REQUIRED	INFORMATION SUBMITTED (replace sample inputs)
10	Contract level (prime or subcontract)	Prime
11	Date of award	1 Oct 1996
12	Contract completion/projected completion date	30 Sep 1998

2. Offerors should send letters to their references cited in paragraph D.1.c.,D.1.d and D.1.f authorizing the government to obtain past and present performance information and indicate in Volume I, Section III that the letters have been sent. A sample letter is at Attachment L-x.

3. Offerors must obtain from their references cited in paragraph D.1.f. above, a completed questionnaire in the format at Attachments L-x and include it in Volume I, Section III

4. The failure to provide the information requested by this section may adversely affect the performance confidence assessment by the government. Offerors are reminded that both independently obtained data and data provided by offerors in their proposal may be used to assess offeror's past and present performance. It is the offeror's responsibility to validate all information provided by the offeror, including telephone numbers and addresses for points of contact.

E. Volume II - Price Proposal

1. General. The price proposal will encompass all prices associated with the requirements of the contemplated contract and will comply with !INSERT SUCH AS-"applicable FAR, NFS, and governing statutory requirements, including Public Law 100-679 and Cost Accounting Standard".

It is contemplated that a single combination Firm Fixed-Price - Indefinite Quantity Contract will be awarded as a result of this RFP. The contract will have a basic performance period and !INSERT NUMBER! options, as follows.

Example:

Basic Period (12 months)	!INSERT DATES SUCH AS "10/1/98 - 9/30/99**"!**
Option 1 (24 months)	!INSERT DATES SUCH AS "10/1/99 - 9/30/01"!
Option 2 (24 months)	!INSERT DATES SUCH AS "10/1/01 - 9/30/03"!

Offerors are exempt from the requirements of submission or certification of cost or pricing data, as defined in FAR 15.401, based on a reasonable expectation of adequate price competition. However, information other than cost or pricing data will be required to allow for evaluation of cost realism and reasonableness.

2. Specific. The pricing schedule is provided in Section B and on a 3 1/2 " diskette (Excel version 5.0) issued with this RFP. Offerors shall complete all pricing information as indicated on the diskette and return the diskette with Volume II. Only the Pricing Summary Sheet shall be included as "hard copy" in the volume.

Additionally, offerors shall submit a detailed breakdown of line item unit prices to include as a minimum the following information for each line item for the base period and each option period:

- contract line item
- annual hours
- labor hours/unit
- labor cost/unit
- equipment % of labor
- equipment cost/unit
- material % of labor
- material cost/unit
- overhead and profit/unit
- management cost /unit
- unit price
- number of units
- total amount

The breakdown shall be structured using Excel version 5.0 and provided on a 3 1/2" diskette labeled “Detailed Breakdown of Line Items”, !INSERT “RFP” AND ITS NUMBER! and your company name.

In a price proposal volume marked "Original,” submit one copy of financial statements and accompanying notes for the two (2) most recently completed fiscal years. In addition, provide data which show the amount of established and/or available lines of credit, the financial institution extending the line and the dollar amount (if any) presently in use.

In a price proposal volume marked "Original,” submit one completed copy of the Representations and Certifications and other forms/submissions as approproiate.

ATTACHMENT L-x

KEY PERSONNEL RESUME

(Complete one form for each proposed Key Person. The resume shall not exceed two pages and does not count toward the page limitation)

1. Name
2. Education/Training/Licenses
3. Proposed assignment: title and organizational element
4. Current position and beginning date
5. Current significant responsibilities or projects
6. Previous positions (last five years)
    a. Firm and period of employment
    b. Significant experience
7. Unique Qualifications. Summarize any relevant unique experience, education, or personal characteristics which may not be evident from the above information.
8. Evidence of commitment to the contract.

ATTACHMENT L-x

PAST AND PRESENT PERFORMANCE OFFEROR'S INFORMATION RELEASE

Offerors should send a letter to their listed references per L-xxxx. authorizing the reference to provide past and present performance information to the government. A sample letter is provided below.

Dear Client:

Our company is currently responding to the NASA _____Center request for proposal number !INSERT "RFP" AND ITS NUMBER! for the procurement of the !INSERT CONTRACT NAME!. This procurement is placing increased emphasis on relevant past and present performance as a source selection factor. The procuring agency is requiring offerors to identify customers and solicit their response regarding our performance.

We have identified your organization as having knowledge of our relevant past and present performance of services provided under contract !INSERT CONTRACT NAME AND NUMBER! . If you are contacted for information on work our company has performed, you are hereby authorized to respond to those inquiries.

Our company has identified Mr./Ms. !INSERT NAME! of your organization as a point of contact based on his/her knowledge concerning our performance. Your cooperation is appreciated. Any questions may be directed to Mr./Ms. !INSERT NAME!.

ATTACHMENT L-x

THIS QUESTIONNAIRE IS SOURCE SELECTION SENSITIVE WHEN COMPLETED

OFFEROR/CONTRACTOR:

CONTRACT NUMBER:

CONTRACT TITLE:

COMPANY/AGENCY:

QUESTIONNAIRE COMPLETED BY (NAME, TITLE, PHONE NUMBER):

1. Describe the contractor's overall performance and management on your contract.

2. Describe how effectively the contractor satisfied the contract technical requirements.

3. Was the contractor's work control process effective in receiving, validating, scheduling and tracking work requests?

4. Did the contractor have an effective Quality System? Was that responsive to detection and correction of causes of non-conformance?

5. Describe the contractor's ability to manage subcontracting arrangements.

6. Were there any labor problems including any work stoppages, pickets, strikes, unfair labor charges and/or arbitration relating to the work on the contract? If so, please describe.

7. Describe the contractor's safety performance.

8. Based on your knowledge and experience with this contractor would you have any reservations in selecting them for award of a similar contract?. If yes, please explain.

SECTION M

Evaluation Factors for Award

SECTION M-x EVALUATION AND SOURCE SELECTION

Proposals will be evaluated by a Source Selection Advisory Board (SSAB) in accordance with the Source Selection Plan (SSP). The information contained in your proposal may be supplemented by information obtained from other government organizations and personnel, commercial sources, and public information sources. The SSAB will be supported as needed by appropriate personnel in conducting the evaluation. The SSAB will carry out its evaluation activities in accordance with the SSP and will report its findings to the Source Selection Authority (SSA), who is responsible for making the source selection decision.

SECTION M-x FAR 52.217-5 EVALUATION OF OPTIONS (JUL 1990)

Except when it is determined in accordance with FAR 17.206(b) not to be in the Government's best interest, the Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. Evaluation of options will not obligate the Government to exercise the option(s).

SECTION M-x RELATIVE IMPORTANCE OF FACTORS AND SUBFACTORS

The SSAB will evaluate the proposals against three factors for award of this contract: mission suitability, past performance and price. The mission suitability factor and past performance factor are of equal importance. Mission suitability and past performance, when combined, are approximately equal to price. Within mission suitability, the management and the technical performance sub-factors are of equal importance.

SECTION M-x BASIS OF AWARD

A. General. Award will be made to the responsible offeror whose proposal meets the requirements of the RFP and offers the best value to the government. The SSA will make the award selection considering the mission suitability evaluation, the past performance evaluation and the price evaluation. The government will strive for maximum objectivity in evaluating each proposal. Sound subjective judgment on the part of government evaluators and the decision-making authority is implicit throughout the source selection process in determining each proposal's overall merit in making the best value decision. The entire proposal will be evaluated for consistency.

B. Evaluation Process.

1. Mission Suitability. The two sub-factors under the mission suitability factor are management and technical performance, which will receive an adjectival rating as shown in

attachment M-x. The evaluation of the mission suitability factor will be performed by comparing the standard for each sub-factor in the evaluation criteria to each proposal. The evaluation criteria and standards are included in article M-x to assist offerors in preparing their proposals and to indicate the point at which each element will be rated as acceptable. Upon completion of evaluation of a sub-factor, the SSAB will assign a summary adjectival rating to the sub-factor.

2. Past Performance. The government will conduct performance confidence assessment, essentially subjective in nature, based on the offeror's relevant past and present performance. The government will use the adjectival ratings defined at attachment M-x to evaluate the offeror's performance history in order to indicate the likelihood of successful performance on this contract. The government will consider information provided by the offerors and information obtained from any other sources. The government is seeking to determine whether the offeror has consistently demonstrated a commitment to customer satisfaction and timely performance at a fair and reasonable price. The government will evaluate the data submitted to determine relevancy. A confidence assessment on performance will then be conducted only on the relevant experience. Particular attention will be given to the areas of management, technical, cost, and labor relations. A negative finding in any area may result in an overall reduced confidence assessment.

Adverse past or present performance information to which an offeror has not had an opportunity to respond will be brought to the offeror's attention before it is made a determining factor regarding the offeror.

3. Price. The price factor will be evaluated to determine whether an offeror's proposed prices are realistic and complete in relation to the RFP and the offeror's overall proposal, and to provide an assessment of the reasonableness of the proposed price.

SECTION M-x EVALUATION CRITERIA

A. Mission Suitability (Factor). Evaluation of mission suitability will focus on comprehension of the management and technical performance requirements of the RFP, soundness and adequacy of the proposed approaches, including responses to the sample problem.

1. Management (Sub-factor). This sub-factor will be used to evaluate the offeror's approach to organizational structure, key personnel, management systems, stewardship, quality management, small business, subcontract management, labor relations and contract start-up. The standard is met when the proposal:

a. Describes a sound management approach that supports requirements, and promotes efficiency.

b. Describes an organizational structure, including lines of authority, roles and responsibilities of key personnel and subcontractors, and a work environment that provides flexibility to meet changes and quick response requirements.

c. Demonstrates that key personnel have the relevant experience and qualifications to effectively manage the functions for which they will have responsibility.

d. Describes management systems that will ensure services provided meet the specified requirements.

e. Describes a stewardship approach toward !INSERT CERTER/INSTALLATION NAME! assets and the environment.

f. Describes a quality management approach based on an effective, up-to-date, documented system, which includes procedures for detecting causes of non-conformance and implementing corrective measures.

g. Describes a reasonable approach to meeting the small and disadvantaged business subcontracting requirements.

h. Describes a subcontract management and teaming approach with effective organizational relationships which identifies and resolves problems before they impact contract performance.

j. Describes an approach to labor relations that demonstrates an understanding and a means for assuring amicable labor relations.

k. Describes a planning and preparation approach that assures full contract performance on !INSERT CONTRACT START DATE!.

2. Technical Performance (Sub-factor). This sub-factor will be used to evaluate the offeror's approach to work planning and performance and customer service responsiveness. This standard is met when the proposal:

a. Describes an effective work management and control process to receive, validate, control, and track work.

b. Describes an approach that accomplishes requirements with the right skills, equipment and materials in the right quantity at the right time.

c. Describes an operations and maintenance approach that effectively maintains and preserves systems and infrastructure to meet availability and reliability requirements at reasonable costs.

d. Demonstrates an understanding of the critical electrical and mechanical systems and describes a realistic risk management program.

e. Demonstrates how the offeror will achieve and maintain a partnership approach to customer satisfaction. Describes a user-friendly customer service system responsive to customer needs and concerns.

B. Past Performance (Factor). A review of an offeror's relevant past and present performance will be made to assess confidence in the offeror's ability to successfully perform the requirements. Relevant experience is the accomplishment of work similar to that required under this procurement which has occurred at least in part during the last three years immediately preceding release of this RFP. Past performance indicates how well an offeror accomplished this earlier work. The government will focus on information that demonstrates quality of performance relevant to the size

and complexity of the procurement. The currency and relevance of the information, source of the information, context of the data, and general trends in contractor's performance will be considered. Recent contracts will be examined to ensure that any necessary corrective measures have been implemented. Prompt corrective action in isolated instances may not outweigh overall negative patterns or trends. Past and present performance will be assessed for relevance, including value in predicting future performance. Contract value, scope, and complexity will be considered in judging relevance. The government will make every attempt to obtain relevant experience and past performance to limit the possibility of an "unknown" confidence rating. The government may inquire about the offeror's ability to recruit and retain experienced/competent key personnel. Both independently obtained data and data provided by offerors in their proposal may be used to assess offeror's past and present performance. The government reserves the right to conduct site visits of past and present locations of offeror's contracts. The adjectival ratings defined in Attachment M-x will be used in assessing each offeror's overall performance record.

C. Price (Factor). Evaluation of the price factor includes an assessment of the validity, realism and adequacy of the price proposal for performance of the contract. Price differences among proposals and their probable causes, such as differences in operating procedures and practices will also be evaluated. Each offeror's proposed prices will be evaluated to determine if the prices are realistic for the work to be performed, if the prices reflect an offeror's understanding of the requirements, and if the Price are consistent with the various elements of the mission suitability section.

For the purposes of proposal evaluation and source selection, the price of the options will be added to the price of the basic contract period of performance.

ATTACHMENT M-x

MISSION SUITABILITY ADJECTIVAL RATINGS

RATING	DEFINITION
Exceptional	Exceeds specified performance or capability in a beneficial way to the Government and has no significant weakness.
Acceptable	Meets evaluation standards and any weaknesses are readily corrected.
Marginal	Fails to meet evaluation standards; however, any significant weaknesses are correctable.
Unacceptable	Fails to meet a minimum requirement of the RFP.

ATTACHMENT M-x

PERFORMANCE CONFIDENCE ASSESSMENT RATINGS

RATING	DEFINITION
Great Confidence	The offeror has demonstrated performance on recent, relevant contracts which provides great confidence that the offeror will meet or exceed requirements in performing this effort. Little or no government oversight or intervention is expected to be required in achieving the proposed level of performance.
Confidence	The offeror has demonstrated performance on recent, relevant contracts which provides confidence that the offeror will meet requirements in performing this effort. It is expected that some government oversight or intervention may be required to meet the contract requirements.
Unknown Confidence (neutral)	The offeror has little or no recent, relevant contract performance.
Some Confidence	The offeror has demonstrated performance on recent, relevant contracts which provides some confidence that the offeror will meet requirements in performing this effort. It is expected that substantial Government oversight or intervention may be required to meet the contract requirements. Changes to the offeror's existing processes may be necessary in order to achieve contract requirements.
No Confidence	The offeror has demonstrated performance on recent, relevant contracts which provides very little or no confidence that the offeror will meet requirements in performing this effort. It is expected that, irrespective of the degree of government oversight or intervention, successful performance is doubtful.

ATTACHMENT B
SUGGESTED AWARD FEE EVALUATION PLAN

Award Fee Evaluation Plan
For
Center Operations Support Services at !INSERT NAME!

A. INTRODUCTION. The Award Fee is used to encourage and reward the contractor for superior performance in meeting the requirements set forth in this contract, to foster pro-active management, and to promote customer service. The Award Fee evaluation will focus on a holistic assessment of contract performance - a global perspective that stresses compliance with the "spirit" rather than the "letter" of the contract. This Plan describes the process for evaluating contractor performance against the Award Fee criteria.

B. ORGANIZATIONAL STRUCTURE.

1. Fee Determination Official. The !INSERT TITLE! will be the Fee Determination Official and will make final award fee determinations. The determinations will be provided in writing to the Contracting Officer.

> NOTE: The Fee Determination Official should be a person with position and reputation that establishes credibility for a subjective decision. Perhaps the Center Director

2. Award Fee Board. The Award Fee Board will be comprised of :

[TITLE]	Chairperson
[TITLE]	Member
[TITLE]	Member

3. Award Fee Administration. The CFM contract COTR will prepare the award fee performance presentations for the Award Fee Board and the Fee Determination Official on a semi-annual basis. The COTR will consolidate performance recommendations and develop award fee performance evaluation reports and presentations. The Contracting Officer (CO) will oversee the COTR and will be the focal point for all formal discussions with contractor management on award fee matters. The COTR supported by Quality Assurance Evaluators and facilities users (customers) will monitor, evaluate, and assess contractor performance.

C. EVALUATION PROCEDURES

1. The Quality Assurance Evaluators and COTR will observe contractor operations, methods and conduct and document instances that are beneficial to the government and to the delivery of services but, if not performed, would not be considered out of contract compliance. Pro-active conduct, innovation, cooperation, flexibility, attention to resource protection, and special safety and security measures are the type of performance characteristics to be recorded. Periodically,

facility users will be informally surveyed for knowledge concerning this aspect of the contractor performance. The COTR will maintain a separate Award Fee administration file. The ACO will oversee the collection of award fee surveillance data and periodically inspect the file.

2. The contractor will be apprised by the ACO of Award Fee Board's general assessment of performance at the mid-point of the evaluation period and at such other times as it may be deemed appropriate. The Award Fee Board will obtain input from the COTR in making this assessment.

3. The Award Fee Board, assisted by the COTR, will summarize its findings and recommendations into a performance evaluation report. Prior to transmittal to the Fee Determination Official, a copy of the report will be provided to the contractor. An adjective rating will not be included in the report, but it will be formal in nature and will cover the contractor's performance over the entire evaluation period. The contractor will be offered five (5) calendar days to comment to the Board on the report and, if it so desires, submit additional data bearing on the evaluation. The contractors written comments, if any, will be forwarded to the Award Fee Board and the Fee Determination Official with the final performance evaluation report.

4. The final evaluation report to be transmitted by the Award Fee Board to the Fee Determination Official will include a recommended adjective rating.

5.. The contractor may make an oral presentation to the Award Fee Board and the Fee Determination Official providing a self- assessment of its demonstrated performance during the evaluation period. The Award Fee Board and Fee Determination Official will decide when such a presentation is appropriate.

D. EVALUATION CRITERIA.

1. The Award Fee evaluation is a holistic assessment of contractor performance. It is an evaluation of the overall results produced by the aggregate contractor effort. Definitive weighted factors are not used for this evaluation. The desired global performance attributes cannot be specified definitively or measured objectively. When attained, this performance has tangible benefit to the government. Satisfactory or better performance of all specific contract requirements, while influencing the award fee evaluation, will not alone merit any award fee. The required standards have been specified and the contract price is presumed to include all contractor costs and a fair profit for full contract performance. The award fee evaluation will assess the extent to which the totality of contract performance achieves such results as:

- instilling confidence that actions will be correct, timely, effective,
- enhancing facility user "quality of life",
- demonstrating initiative and innovation,
- practicing stewardship with government resources, and
- minimizing contract administration effort.

Contractor effort to achieve these results merits some financial reward through an Award Fee. The final evaluation rating will be subjective but will be supported by documented data, interpretations, and rationale.

E. ADJECTIVE DEFINITIONS AND AWARD FEE SCALE

1. A performance rating will be assigned by the Fee Determination Official using the following adjective ratings and standards.

PERFORMANCE	STANDARD
Superior	Performance uniformly well above standard; Self initiated and innovative management actions have resulted in tangible benefit to the government; contract administrators and facility users are highly confident all work will be done right the first time; an ethical partnering environment is pervasive in the contract relationship.
Excellent	Performance of some tasks well above standard; innovative management actions have resulted in some tangible benefit to the government; contract administrators and facility users are confident work will be done right and rework or slippage will be rare and minor; a strong partnering attitude is present in the contract relationship.
Good	Performance of a few tasks above standard with remainder meeting contract requirements; self initiated management actions are infrequent and have limited benefit to the government; most work is done right the first time with occasional rework and slippage; partnering is an active component of the contract relationship.
Satisfactory	Performance of most tasks meet or exceed contract requirements and those which falls below standard are offset by those exceeding standard; most work is done right the first time but rework and slippage is occasionally disruptive to facility users; some crisis management is evident; partnering is a component of the contract relationship.
Unsatisfactory	Performance of many tasks below standard; poor work quality and slippage is often disruptive to facility users; crisis management is the "norm"; partnering participation is superficial.

2. The Award Fee will be earned only for ratings of Superior and Excellent. Award Fee earned for those ratings is shown in the following Table.

CONTRACT YEAR	PERIOD	DATES	SUPERIOR AWARD FEE	EXCELLENT AWARD FEE
1	1	10/1/99 - 3/31/00	$50,000	$30,000
1	2	etc.	$50,000	$30,000
2	1		$60,000	$40,000
2	2		$60,000	$40,000
3	1		etc.	etc.
3	2			
4	1			
4	2			
5	1		$80,000	$60,000
5	2		$80,000	$60,000

NOTE: This example is based on a $4-Million contract at 2% first year; 3% year 2 through 4, and 4% year 5. Maximum award for superior and less for excellent. A percentage could be used rather than a definitive amount but fixing the amount based on Government estimate of contract price is preferable.

F. AWARD FEE PERFORMANCE DETERMINATION

1. After consulting with the Award Fee Board and the COTR, the Fee Determination Official shall make a final, unilateral performance rating and award fee determination. Generally, the Fee Determination Official will make the award fee determination within 45 days from the end of the period being evaluated. The Fee Determination Official's unilateral determination shall not be subject to the clause of this contract entitled "Disputes" and there are no provisions for additional appeal rights. After receipt of the Fee Determination Official's award fee determination letter, the Contracting Officer shall promptly prepare a contract modification reflecting the award fee adjective rating and award fee earned.

ATTACHMENT C
RECOMMENDED CONTRACT STRUCTURE

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ATTACHMENT D
RECOMMENDED TECHNICAL SECTION C

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PART I - THE SCHEDULE

SECTION C: DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

ATTACHMENT E
PROPOSED SOURCE SELECTION PLAN

SOURCE SELECTION PLAN

CENTER OPERATIONS AND SUPPORT SERVICES CONTRACT,
NASA !INSERT CENTER/INSTALLATION NAME AND LOCATION!

1. INTRODUCTION

1.1 General. This plan establishes the procedures and criteria for evaluation of proposals submitted in response to the Request for Proposals (RFP) for Solicitation !INSERT IDENTIFICATION!. This acquisition will result in a combination firm fixed-price and indefinite quantity contract for facilities management services at the NASA !INSERT CENTER/INSTALLATION NAME AND LOCATION!. The contract will be acquired by competitive negotiation with award based on price and other non-price factors.

1.2 Scope of the Acquisition. The contract being acquired will provide operation, maintenance, repair, construction, and other service for facilities, structures, utilities, and related systems and equipment at the NASA !INSERT CENTER/INSTALLATION NAME AND LOCATION!. The contractor will provide all management, administration, supervision, labor, materials, tools, transportation and equipment required to perform the contract. The contract is for a base period of !INSERT NUMBER! months and shall include two (2) two-year options, for an estimated five (5) year total of !INSERT DOLLAR VALUE!.

2. ORGANIZATION

2.1 Source Selection Authority. !INSERT NAME AND TITLE!, shall be the Source Selection Authority (SSA) for this procurement. The SSA is responsible for ensuring that all aspects of the selection are conducted properly. !INSERT NAME! shall consider any ratings and recommendations of the Source Selection Advisory Board (SSAB) and the evaluation panel.

> **NOTE**: The SSA should be a senior person with the maturity, experience and knowledge to understand and integrate complex information sets and make supportable decisions based, in part, on subjective factors.

2.2 Contracting Officer. !INSERT NAME AND TITLE!**,** shall be the Contracting Officer (CO) for this procurement. The CO shall be responsible for management of this procurement from acquisition planning through contract award. Major elements of responsibility are:

a. Prepare and issue RFP and any amendments,
b. Conduct pre-proposal conference,
c. Handling inquiries from the contractor community before proposal receipt,
d. Receive proposals,
e. Control exchanges with offerors including clarifications and discussions,

f. Obtain negotiation business clearances,
g. Award contract.

Throughout the procurement the CO will provide expert advice and oversight on Federal Acquisition Regulations (FAR) to the SSA, SSAB and the evaluation panels.

2.3 Source Selection Advisory Board. A Source Selection Advisory Board (SSAB) with the following membership will evaluate proposals and other appropriate information and advise the SSA on the best value rankings of the proposals.

Membership

!INSERT NAME!	Chairperson
!INSERT NAME!	Member
!INSERT NAME!	Member

NOTE: Board members should have responsible experience with some combination of management, financial, contracting, or facilities management in the Center setting. They do not need to be from the involved Center. Demonstrated analytical ability is important.

Major elements of responsibility for the Board are:

a. Conduct the evaluation of offers using offeror's proposals, performance information from other sources, and clarifications, discussions and negotiations;
b. Make recommendations to SSA on all phases of selection process including need for discussions;
c. Assist the CO in conducting discussions and negotiations;
d. Oversee the evaluation panels;
e. Prepare the Source Selection Advisory Report with a recommendation for the best value offer.

2.4 Technical and Management Evaluation Panel. Working in conjunction with the SSAB, the Technical and Management Evaluation Panel (TEP) shall assess the Mission Suitability section of the proposal addressing both the Management and Technical sub-factors.

Membership

!INSERT NAME!	Chairperson
!INSERT NAME!	Member
!INSERT NAME!	Member

Major elements of TEP responsibility are:

a. Evaluate the Management and Technical sub-factors based on the Mission Suitability Section of each proposal;
b. Assist the SSAB and the CO in conducting discussions and negotiations;
c. Assist the SSAB, as requested, with evaluation of Past Performance information;

d. Prepare a Mission Suitability Evaluation Report that addresses individual offerors ratings and identifies specific strengths and weaknesses.

2.5 Price Evaluation Panel. The Price Evaluation Panel (PEP) shall evaluate the price proposal under the general guidance of the CO.

Membership

!INSERT NAME!	Chairperson
!INSERT NAME!	Member

Major elements of PEP responsibility are:

a. Evaluate the Price Proposal;
b. Assist the SSAB and the CO in conducting discussions and negotiations;
c. Prepare a Price Evaluation Report that describes the analyses performed and an assessment of the reasonableness of each offeror's price.

3. PRE-SOLICITATION ACTIVITY

A pre-solicitation notice !INSERT "WILL APPEAR" OR "APPEARED! in the Commerce Business Daily in !INSERT DATE! and a synopsis also !INSERT "WILL APPEAR" OR "APPEARED"! in the Commerce Business Daily in !INSERT DATE!. Surveys and experience show that numerous sources are available to propose on this procurement which will ensure adequate competition. A pre-proposal conference and site visit !INSERT "WILL BE" OR "HAS BEEN"! conducted to answer any questions concerning the specification and RFP procedures.

4. ACQUISITION STRATEGY

Award will be made to the offeror whose proposal is determined most advantage to the Government considering price and other factors. It may be necessary for the Government to open discussions prior to award of the contract to identify deficiencies and request clarifications, to ascertain that all offerors fully understand the requirements of the RFP. Therefore, pursuant to FAR 6.401, it has been determined that it is in the best interest of the Government to solicit competition through the use of competitive negotiations procedures, specifically formal source selection. Should the procedures described in this plan result in recommendation of award to other than the low conforming offer, a detailed written explanation (value analysis) of the substantial extra benefit the Government will receive by spending the additional money will be prepared for approval be the SSA.

5. EVALUATION PROCESS

5.1 General. The Mission Suitability factor and Past Performance factor are of equal importance and within Mission Suitability, the Management and the Technical sub-factors are of equal importance. Mission Suitability and Past Performance, when combined, are approximately equal to price in determining the best overall value to the government. Award may be to other than the lowest offeror. The objective is selection of a contractor, whose proposal demonstrates the understanding and capabilities to perform the services within the time and quality requirements of

the RFP and striking the most advantageous balance between management/technical and past performance considerations and cost to the Government.

5.2 Procedures.

a. The proposal shall be submitted in two volumes with Volume I containing *Mission Suitability and Past Performance* information and Volume II containing the *Price Proposal*. The proposals will not be publicly opened.

b. The CO will initially review the proposals for conformance with the requirements of the RFP. The SSAB Chairperson will be advised and consulted regarding any major discrepancies.

c. Volume I will be provided to the SSAB Chairperson who will assign the Mission Suitability portion to the TEP, the Price Proposal to the PEP, and, with the SSAB, conduct the Past Performance Assessment.

d. The SSAB will establish a competitive range of offerors considered to have a reasonable chance of selection for award based on the evaluations.

5.3 Evaluation Guidelines.

a. FAR Part 15 and this Source Selection Plan are basic references for conducting this Source Selection.

b. Proposals will be evaluated solely on the criteria stated in the RFP and provided at Attachment E-1 to this plan. Evaluators will consider only information contained in the offeror's proposal and obtained from performance references.

c. The Management and Technical sub-factors of Mission Suitability will be evaluated on a subjective basis against the criteria described in the RFP. Adjectival ratings will be assigned to each sub-factor and to the Mission Suitability factor.

d. A subjective review will be made of Past Performance to assess confidence in the offeror's ability to successfully perform the contract requirements. An adjectival confidence assessment rating will be assigned to each offeror.

e. Evaluation of price will be based on comparative price analysis by the PEP with oversight by the CO. The price assessment will be referred to the SSAB after completion of the non-price factor evaluations.

5.4 Price Evaluation. The PEP will perform a price analysis using one or more of the following techniques:

a. Comparison of proposed prices received from offerors,
b. Comparison of pricing data with the mission suitability proposal, i.e. should-cost analysis,
c. Comparison of proposed prices with the independent government estimate.

The PEP may obtain estimating support and commercial price data from other personnel as deemed necessary in performing the analysis. To ensure price confidentiality, these communications will be conducted through the CO.

5.5 Mission Suitability Evaluation. The TEP shall evaluate the information submitted in the Mission Suitability section of each offeror's proposal without reference to or comparison with other proposals. Each member shall evaluate each proposal independently utilizing worksheets to record strengths and weaknesses of the proposal and will prepare a detailed narrative analysis of each proposal in relation to the criteria. The Chairperson will reconcile significant differences and develop composite adjectival ratings for the sub-factors and the factor through group discussion. The Chairperson, with member support, will prepare a summary evaluation narrative that details the strengths, weaknesses and deficiencies of the proposals and fully supports the assigned adjectival ratings.

5.6 Past Performance Evaluation. The SSAB will evaluate past performance of each offeror while the TEP and PEP evaluations. The SSAB will consider the past performance information provided by the offeror in Volume I and that received through questionnaires from past and current clients. Additionally, information may be obtained from other sources as judged necessary. Each offeror will receive a Performance Confidence Assessment rating based on the criteria in Section M of the RFP and included here as Attachment E-2. A narrative report will be prepared which fully supports the assigned rating for each offeror.

Relevant adverse performance information obtained in the questionnaires or from other sources to which the offeror had not had an opportunity to respond will be clearly identified. Should this later become a determining factor for further consideration of the offeror, an opportunity to respond will be provided by the CO.

6. DETERMINATION OF BEST VALUE

6.1 Establish Competitive Range. The SSAB will examine the evaluation results for the three factors for each proposal and decide if discussions are necessary to determine the best value to the government. At this point, the SSAB may communicate, through the CO, only with offerors:

a. who have not had a prior opportunity to respond to adverse past performance information, and
b. whose exclusion or inclusion from the competitive range is uncertain.

These communications may be used only to:

a. enhance understanding of proposals;
b. explore issues essential to resolving the uncertainty about placement in the competitive range; and
c. address adverse past performance information.

These communications may not be used to cure deficiencies or materially revise the proposal.

If discussions are needed, the SSAB will recommend a competitive range comprised of the most highly rated proposals to the SSA. After approval by the SSA, the CO will notify each offeror of the assigned category.

6.2 Discussions with Offerors. Negotiations, called discussions, are undertaken with the intent of allowing an offeror to revise a proposal in order to maximize the Government's ability to obtain best value. The discussions are tailored to each proposal and address weaknesses, deficiencies or other aspects which are susceptible to alteration that could increase the proposal's potential for award. Discussions are conducted by the CO, preferably in writing, with the full support and participation of the SSAB who may call on the TEP for technical assistance. It is appropriate to advise an offeror during discussions of specific evaluation reactions such as the price being ~~is~~ too high or low, the management system being more or less complex than necessary, and similar items.

During the discussions an offeror may make proposal revisions to clarify or document understandings reached. Also, an offeror may no longer be considered among the most highly rated and may be eliminated before discussions are completed. At the conclusion of discussions, offerors still in the competitive range shall be given an opportunity to submit a final proposal revision involving price or other factors (commonly called a Best and Final Offer or BAFO).

6.3 Source Selection Decision. The revised proposals will be evaluated and rated by the SSAB and the evaluation panels, as necessary, and a narrative report prepared addressing the affect of the revisions and supporting the final ratings. The SSAB will then make a best value determination considering the evaluations and relative weights of the factors. A written recommendation with supporting rationale including a value analysis, if other than the lowest cost proposal is recommended, shall be provided to the SSA.

The SSA will consider the evaluation reports from the SSAB and TEP and the best value recommendation of the SSAB but the source selection decision shall represent an independent judgment. The decision will be documented with the rationale for any business judgments, tradeoffs and additional costs but these do not require quantification.

7. SAFEGUARDING INFORMATION

7.1 General. After receipt of proposals, none of the information contained in them or concerning the number or identity of the offerors shall be made available to the public or anyone in the government not having a need-to-know. Care shall be exercised to protect all source selection data during the process and only the SSA has the authority to release any source selection data. Only those individuals participating in this source selection as SSA, SSAB and evaluation panel members, CO, and an official advisor have a need-to-know. These individuals shall be briefed on Procurement Integrity and shall sign a Procurement Integrity certificate before participation in the source selection.

7.2 Notifications and Debriefings. Unsuccessful offerors shall be notified by the CO after award and in accordance with FAR 15.609 and 15.1001. Debriefing of unsuccessful offerors shall be in accordance with FAR 15.1003. The CO will conduct the debriefings with assistance from the SSAB and evaluation panels as needed.

ATTACHMENT E-1

A. Mission Suitability (Factor). Evaluation of mission suitability will focus on comprehension of the management and technical performance requirements of the RFP; soundness and adequacy of the proposed approaches, including responses to the sample problem.

1. Management (Sub-factor). This sub-factor will be used to evaluate the offeror's approach to organizational structure, key personnel, management systems, stewardship, quality management, small business, subcontract management, labor relations and contract start-up. The standard is met when the proposal:

a. Describes a sound management approach that supports requirements, and promotes efficiency.

b. Describes an organizational structure, including lines of authority, roles and responsibilities of key personnel and subcontractors, and a work environment that provides flexibility to meet changes and quick response requirements.

c. Demonstrates that key personnel have the relevant experience and qualifications to effectively manage the functions for which they will have responsibility.

d. Describes management systems that will ensure services provided meet the specified requirements.

e. Describes a stewardship approach toward Center assets and the environment.

f. Describes a quality management approach based on an effective, up-to-date, documented system that includes procedures for detecting causes of non-conformance and implementing corrective measures.

g. Describes a reasonable approach to meeting the small and disadvantaged business subcontracting requirements.

h. Describes a subcontract management and teaming approach with effective organizational relationships which identifies and resolves problems before they impact contract performance.

i. Describes an approach to labor relations that demonstrates an understanding and a means for assuring amicable labor relations.

j. Describes a planning and preparation approach that assures full contract performance on !INSERT CONTRACT START DATE!.

2. Technical Performance (Sub-factor). This sub-factor will be used to evaluate the offeror's approach to work planning and performance and customer service responsiveness. This standard is met when the proposal:

a. Describes an effective work management and control process to receive, validate, control, and track work.

b. Describes an approach that accomplishes requirements with the right skills, equipment and materials in the right quantity at the right time.

c. Describes an operations and maintenance approach that effectively maintains and preserves systems and infrastructure to meet availability and reliability requirements at reasonable costs.

d. Demonstrates an understanding of the critical electrical and mechanical systems and describes a realistic risk management program.

e. Demonstrates how the offeror will achieve and maintain a partnership approach to customer satisfaction. Describes a user-friendly customer service system responsive to customer needs and concerns.

MISSION SUITABILITY ADJECTIVAL RATINGS

RATING	DEFINITION
Exceptional	Exceeds specified performance or capability in a beneficial way to the Government and has no significant weakness.
Acceptable	Meets evaluation standards and any weaknesses are readily corrected.
Marginal	Fails to meet evaluation standards; however, any significant weaknesses are correctable.
Unacceptable	Fails to meet a minimum requirement of the RFP.

B. Past Performance (Factor). A review of an offeror's relevant past and present performance will be made to assess confidence in the offeror's ability to successfully perform the requirements. Relevant experience is the accomplishment of work similar to that required under this procurement which has occurred at least in part during the last three years immediately preceding release of this RFP. Past performance indicates how well an offeror accomplished this earlier work. The Government will focus on information that demonstrates quality of performance relevant to the size and complexity of the procurement. The currency and relevance of the information, source of the information, context of the data, and general trends in contractor's performance will be considered. Recent contracts will be examined to ensure that any necessary corrective measures have been implemented. Prompt corrective action in isolated instances may not outweigh overall negative patterns or trends. Past and present performance will be assessed for relevance, including value in predicting future performance. Contract value, scope, and complexity will be considered in judging relevance. The government will make every attempt to obtain relevant experience and past performance to limit the possibility of an "unknown" confidence rating. The government may inquire about the offeror's ability to recruit and retain experienced/competent key personnel. Both independently obtained data and data provided by offerors in their proposal may be used to assess offeror's past and present performance. The government reserves the right to conduct site visits of past and present locations of offeror's contracts. The adjectival ratings defined in Attachment M-x will be used in assessing each offeror's overall performance record.

C. Price (Factor). Evaluation of the price factor includes an assessment of the validity, realism and adequacy of the price proposal for performance of the contract. Price differences among proposals and their probable causes, such as differences in operating procedures and practices, will also be evaluated. Each offeror's proposed prices will be evaluated to determine if the prices are realistic for the work to be performed, if the prices reflect an offeror's understanding of the requirements, and if the prices are consistent with the various elements of the mission suitability section.

For the purposes of proposal evaluation and source selection, the price of the options will be added to the price of the basic contract period of performance.

ATTACHMENT E-2

PERFORMANCE CONFIDENCE ASSESSMENT RATINGS

RATING	DEFINITION
Great Confidence	The offeror has demonstrated performance on recent, relevant contracts which provides great confidence that the offeror will meet or exceed requirements in performing this effort. Little or no government oversight or intervention is expected to be required in achieving the proposed level of performance.
Confidence	The offeror has demonstrated performance on recent, relevant contracts which provides confidence that the offeror will meet requirements in performing this effort. It is expected that some government oversight or intervention may be required to meet the contract requirements.
Unknown Confidence (neutral)	The offeror has little or no recent, relevant contract performance.
Some Confidence	The offeror has demonstrated performance on recent, relevant contracts which provides some confidence that the offeror will meet requirements in performing this effort. It is expected that substantial Government oversight or intervention may be required to meet the contract requirements. Changes to the offeror's existing processes may be necessary in order to achieve contract requirements.
No Confidence	The offeror has demonstrated performance on recent, relevant contracts which provides very little or no confidence that the offeror will meet requirements in performing this effort. It is expected that, irrespective of the degree of Government oversight or intervention, successful performance is doubtful.

ATTACHMENT F - LESSONS LEARNED FROM JBOSC AT KSC

Performance Based Contracting

Lessons Learned

by

The Joint Base Operations & Support Contract (J-BOSC)
Procurement Team

at

Cape Canaveral Air Station,
Patrick Air Force Base,
and
Kennedy Space Center, Florida

September 1, 1998

Chris Fairey / Co-Chair
NASA / KSC

Ed Gormel / Co-Chair
USAF / 45TH SW

Editor's Note:

This document is a compilation of ideas and experiences gained by the members of the joint NASA/U.S. Air Force Procurement Team at Cape Canaveral Air Station, Patrick Air Force Base, and the Kennedy Space Center. As the team progressed with the procurement, anyone who wished to contribute was invited to furnish their observations and insights to this document.

A special thanks is given to Tom Russell for his contribution from his research project, *A Case Study of Federal Acquisition Reform*. He provided thoughtful insight on how the J-BOSC procurement team met the intent of the performance contracting guidelines provided by the Office of Federal Procurement Policy.

Lamar Russell, Editor
Mission Suitability Team Member

Contents

1.0 Introduction

NASA/Kennedy Space Center (KSC) and the Air Force, 45th Space Wing (45th SW) issued a Request for Proposal (RFP) to award a single contract for base support services to include KSC, Patrick Air Force Base (PAFB), and Cape Canaveral Air Force Station (CCAS). This contract is known as the Joint Base Operations & Support Contract (J-BOSC). It consolidates seventeen 45th Space Wing service contracts as well as the Launch Base Support (LBS) contract at CCAS and the Base Operations Contract (BOC) at KSC. Services included in the consolidated contract are: security/law enforcement, fire protection, badging, dispatch, configuration management, crane management, facilities operations and maintenance (O&M), roads and grounds O&M, heavy equipment, disaster preparedness, work control, information services, medical, life support, propellants, non-destructive tests, standards and calibrations, printing, aircraft operations and maintenance, industrial hygiene, library services, design engineering, construction, and mail service.

2.0 Background

The joint Procurement Team, comprised of personnel from NASA/KSC and the Air Force/45th Space Wing, implemented an acquisition approach which utilized numerous streamlining tools: Internet communications, early industry involvement, on-site observation period, incremental release of the draft RFP, and performance based contracting. Performance Based Contracting (PBC) is a result-oriented approach that utilizes performance standards that help the government achieve its goals. The Procurement Team prepared a Statement of Objectives (SOO) which provided the basic top-level objectives of the contract. The team also prepared a set of Technical Task Descriptors (TTD) which briefly described the work to be performed and the associated performance standards (no "how-to"). A technical library (electronic and hardcopy) was established to include workload indicators (WLI) that provided offerors with historical information concerning the frequency of occurrence and the duration of the tasks they will be required to perform. Using the SOO, the TTD, and the WLIs, the contractor was to provide a Statement of Work (SOW) that would demonstrate their understanding of the government's requirements and describe their performance based approach to accomplishing the work. Another cornerstone of performance based contracting is the development of performance metrics. The government and the selected contractor intended to develop metrics, post award, that would become the core of the government's "insight" approach to contract surveillance.

3.0 J-BOSC BOARD

Source Selection Authority (SSA) -
Roy Bridges
Source Selection Advisory Council (SSAC) - BGen. F. Randall Starbuck

SEB Chairpersons
Chris Fairey
Ed Gormel

EX-OFFICIO
Mike Sumner
LtCol. S Holtschneider (Transferred)
Dartha Hilbert
Mike Del Vesco (Transferred)
Jesus Pernas-Giz

Ruth Pauwee
Ken Winslette

Members at Large:
Jan Heuser
Maj. Victor Tasiemski

Recorder
Rose Caudle

Administrative Support
Peggy Parrish
Jennifer Warren
Vicki Willmon (Transferred)

Legal - Dudley Cannon
Marty McAlwee

Performance Risk Assessment Group
Chair - Craig Kruse

Mission Suitability Co-Chairs
Shannon Bartell
Fred Bailey

Business Committee Co-Chairs
David Wansley
Ken Winslette (Transferred)
Gerri Frye

Technical Team
Lead - Eddie Lebron

Management Team
Lead - Maj. Greg Snyder

4.0 COMMITTEES

Mission Suitability Committee
Co-Chairs: Shannon Bartell
Fred Bailey

Technical Team
Lead - Eddie Lebron
Don Ackerman
John Calvert
Mike Cardinale
Walt Covington
Tammy Dresbach
John Fablinger
Ed Hefley
Robert Mott
Ken Newton
Tom Russell

Management Team
Lead - Maj. Greg Snyder
Nancy Bray
Regina Bronson
Tom Hull
Lamar Russell
Troy Turbyville

Business Committee
Co-Chairs: David Wansley
Ken Winslette (Transferred)
Gerri Frye
Pat Beall
Maria Bechard
Tammy Burlein
Rodney Berwanger
Mitch Colvin
Lt. Thomas Gates (Transferred)

Robert Zuber

Performance Risk Assessment Group

Chair: Craig Kruse

Bob Fowler
Howie King
Lt. Rod Ragsdale
Al Silva

5.0 Procurement Development Team (PDT) Lessons

The blending of the NASA and Air Force cultures is a good news story because of the excellent top level management relationships that were reflected downward throughout both organizations. The most important single factor in making up the successful teamwork was the quality of people selected for the procurement team. The type of person to work well in any inter-organizational assignment is one who leaves attitudes behind and arrives with the willingness to see the other point of view and to work out differences. They must be assigned full time and not as an additional duty. Giving up this type of valuable person to a temporary assignment is a painful sacrifice for any parent organization. To the credit of the top management, those types were made available and assigned to the team. They worked around obstacles instead of running up against them.

When the two organizations were brought together, the "language" and philosophies of the two cultures had to be mutually understood. At the beginning, the two parties would leave a conversation with two different understandings about the outcome. An example: Where NASA talks about "C of F" (Construction of Facility), the Air Force talks in terms of "MIL CON" (Military Construction). In general, both terms refer to new construction, but they are different in many aspects. When the conversation about writing new construction requirements took place, the NASA employees thought and talked in terms of C-of-F, and the Air Force employees thought and talked in terms of MIL CON. Both parties could walk away with different understandings of the agreements thought to have been reached. The two parties were constantly checking and rechecking one another about definitions and philosophy. Another difference that consumed much time was understanding how each local organization related to its headquarters. Both, Air Force and NASA organizational structures had to be defined from top to bottom for the team members to understand how NASA KSC related to NASA Headquarters in Washington and how the 45th Space Wing related to its headquarters command structure in the Pentagon. The major NASA headquarters organizations and major Air Force commands, as they related to this procurement, had to be carefully communicated in team training sessions.

Once the group began to function as a team, other outside training was brought forward to aid in writing the Request for Proposal (RFP). An instructor from the Air Force Materiel Command presented the elements of writing Statement of Objectives (SOO). An instructor from the Pentagon (who had also worked for NASA) presented the elements of writing good Performance Standards for performance contracting.

Once the procurement team management is established, it must by prepared to say no to some persons offered up to be assigned to the team. Some organizations will take the opportunity to assign people with tunnel vision. Tact, diplomacy and firmness will be required to say no to this

type of help. The 45th Wing commander and the Kennedy Space Center director were extremely supportive during the selection and assignment process.

Each procurement team must ask itself if there is an advantage to the acquisition by having the entire team to develop the Request for Proposal (RFP). In the case of the J-BOSC team, it was better to have the maximum initial number of people (approximately 40 people) develop the RFP, SOO, TTDs, and WLIs, because so much joint activity and learning took place.

Where two government organizations are combined for a joint effort, it is important for the line organizations to identify and commit the team member full time in order to aid the teaming process. Members should not be assigned that cannot devote their full effort to the tasks - part time members attempting to function in their past capacity are disruptive to team efforts and hinder project/tasks completion. Military members should not be assigned if military ancillary duties take precedence.

When Civil Service employees are selected for participation on the Board or Committees, their assignment should be officially accomplished through management reassignment or other appropriately documented personnel action. When the period of the procurement development will exceed 6 months, or over half of the normal employee performance evaluation period, employee performance plans should be changed to reflect the duties and responsibilities of the assignment. Official supervisory chains should be identified early to avoid the occurrence of having two bosses or having employees with split organizational loyalties.

KSC and the 45th SW no longer have a facility for a large board, so the procurement teams had to utilize a facility set up for multiple SEBs. Two satellite review facilities also had to be utilized for the Performance Confidence Assessment Committee (PCAC) and the evaluation advisors.

Autonomy of PDT and board actions should be determined at the outset. The amount of influence to be experienced from outside sources, such as executive management inputs to contract structure and development, should be clarified before start of Acquisition Strategy development. Once the goals and objectives of these external influences are understood and considered the amount of redirection and restructuring of the ASM presentations would be reduced.

A procurement philosophy should be formalized and used as a charter for all members of the PDT. Application of the philosophy impacts the levels of detail and the eventual outcome of the RFP documents.

Performance Confidence Assessment Committee (PCAC) should stand up with dedicated members assigned at the same time as other PDT committees/groups. PCAC and other committees/groups should all be co-located within immediate proximity. Separating the PCAC is a nice “political” move but has added unnecessary communication and security issues. Geographical separation increases logistics support problems and security risks for potential proposal information disclosure.

If off-site locations are used, the procedures of obtaining operational funding and funding for equipment support as well as required security actions should be made known to the chair(s) of any off-site committees or groups.

Development of a PCAC information binder with all available current and relevant Past Performance Information was considered by members of the PCAC team to be beneficial in overcoming the steep learning curve for those members with little or no past experience with participation on a PCAC team.

6.0 Acquisition Strategy Panel / Acquisition Strategy Meeting (ASP/ASM) Lessons

6.1 Preparing for the Acquisition Strategy Meeting

Acquisition strategy requires an enormous amount of coordination when only one government agency is involved. The amount of coordination multiplies almost geometrically with a joint procurement between two government agencies. Another layer of coordination happened as changes occurred in the Federal Acquisition Regulations (FAR). In the case of this contract, the J-BOSC Procurement Development Team (PDT) was developing and coordinating the acquisition strategy at the same time as the FAR 15 Rewrite. These changes were numerous and far-reaching. The changes in the areas of source selection authority and ranking and rating systems especially effected the J-BOSC acquisition strategy since these methodologies were at the heart of source selection. In this changing procurement environment, the PDT adopted the approach of selecting the best evaluation and source selection methodologies for this procurement by working closely with the personnel who were conducting the FAR 15 Rewrite. The PDT had to be careful about understanding how the NASA FAR Supplement and the Air Force FAR (AFFAR) were affected. After incorporating these methods into their proposed strategy the PDT then took a lot of time to re-coordinate the ideas with all of the areas of NASA and Air Force procurement. There were many pre-coordination meetings. They were arduous and time-consuming, but they were necessary. The tremendous time and coordination effort led up to the very important Acquisition Strategy Meeting where the J-BOSC procurement strategy was given the final go-ahead.

The Air Force refers to the Acquisition Strategy Panel (ASP), and NASA refers to the Acquisition Strategy Meeting (ASM) when discussing the acquisition strategy preparations and presentation products. The referrals to ASP or ASM when both cultures were talking about the same thing caused some initial confusion, but this small disconnect resolved itself. When the Procurement Development Team reached agreement use the NASA procurement process, the procurement team used the NASA designation, ASM, in presentation products. However, the terms ASP and ASM became interchangeable in conversations, and the following narrative refers to ASP/ASM in order to better communicate these lessons in terms familiar to both Government organizations.

This lessons learned section is designed to help the user in developing an acquisition strategy. It is built from experiences in preparing for the Acquisition Strategy Meeting (ASM) as well as inputs from the panel members for future strategy development. The lessons learned are divided into four categories to make it easier for the user to navigate through the Acquisition Strategy Planning Process (ASPP).

I. Preplanning Stage

A. Templates

1. Be aware that the templates provided by the ASP Secretariat or the ASM guidelines provided by NASA are tailorable. The structure of the meeting is also tailorable according to the specific needs of the program.

B. Correspondence

1. The ASP Secretariat, the program office, and other involved offices need to work together closely when issuing guidance on an upcoming ASM/ASP. It is important that the chair understand the process as well as approve attendance prior to convening the ASM/ASP.

C. Scheduling

1. When setting up the ASM/ASP, identify the focal point for all scheduling and rescheduling. Multiple phone calls from various offices tend to cause confusion on the attendees' calendars.

2. Ensure that a focal point in the Pentagon or NASA HQ is identified early if the ASM/ASP is to take place in Washington. They are in a better position to assist in the logistics of setting up the meeting: nameplates, seating positions, and making copies of the briefings.

3. ASM attendees other than standing members should be controlled by the program office and ASM/ASP chairperson. The ASM/ASP should be rescheduled if key participation is not possible at the proposed date. The chairperson should approve all ASM/ASP attendees beyond the standing members. In all cases, ensure the ASM/ASP chairperson knows who is attending the ASM/ASP at least one full day prior to the scheduled date.

4. Verify security classification of the ASM/ASP and plan early to prepare the required paperwork (Visit Requests, etc.,).

5. If possible, consider use of satellite broadcasts to involve more of other programs.

6. Include other directors who have experience in the particular program phase being addressed by the ASM/ASP.

II. Conducting the ASM/ASP

A. ASM/ASP Meeting

1. After all the input, coaching, and coordination with the outside, take the time to practice the briefing with the PDT. Practice briefing yields the benefits of in-house critique for smoothing and improving the pitch, and it gives the PDT membership opportunity to buy in and get comfortable with the approach.

2. Before beginning the ASM/ASP, ensure that all members expected to attend are present. This is crucial if the ASM/ASP is held via video conference or audio hook-up.

Avoid the situation where the chair assumes key members are present, but discovers some time into the meeting that this is not the case.

II. Administrative Details

A. Someone from the program office or PEO office should be responsible for action items. The ASM/ASP Secretariat may assist in taking notes and documenting action items, but only the program office personnel are experts in the issues being discussed.

III. Acquisition Strategy

A. It is best to understand the ASM/ASP Chair's current thought on award fees. If the program office is not basing the award fees on current ASM/ASP Chairperson preferences, the briefer needs to be prepared to defend his or her position.

IV. Post-ASM/ASP Activities

A. Finalize action items prior to departing the location of the ASM/ASP while memories are fresh.

6.2 Results of the Acquisition Strategy Meetings/Panel

Good pre-ASM/ASP coordination with the outside world, particularly the audience, paid off in an amazingly smooth meeting. Excellent relationships with top KSC/45SW management were established, and joint aspects of the effort were very effective. Because of the excellent relationships between top KSC/45SW, good teamwork was established between KSC and 45SW personnel. Dual chairs established throughout the team structure worked well.

After the acquisition strategy was approved in the Acquisition Strategy Meeting, the letter of appointment was issued which appointed the Source Evaluation Board for the J-BOSC.

7.0 Board Operational Efficiencies

The Source Evaluation Plan (SEP) should clearly depict the milestone events and schedules associated with them. Sufficient detail should be included to adequately define what products are required and in what format they are to be provided. Without this level of detail each committee working to meet milestone schedules and deadlines can, and did, produce different products that did not lend themselves to incorporation in the Source Board products. Essentially, a method and format for information roll-up should be defined early to preclude the inevitable redirection and repackaging of information to meet SEB needs. A chart format was finally selected versus the narrative report format after several meetings and discussions. The SEP should include the handling of the various committee forms and the process that will be used to address submittals, re-submittals, acceptance and documentation of committee and board actions regarding the forms.

For joint PDTs each committee should be equally balanced, having co-chairs representing each of the joint organizations and each committee having equal voting authority. Our experience with the PCAC having a single committee lead did not allow for consistent support of both Source Board activities and PCAC Committee Chair taskings. Additionally, when the Past Performance

evaluation factor is of equal value with the Mission Suitability and Cost factors in the selection process, then PCAC co-chairs should have equal voting authority as the other co-chairs.

Instructions should be given to committee co-chairs to discuss internal issues prior to board meetings so a consolidated committee position can be presented to the board. These pre-discussions will to minimize the length of board meetings.

At-Large Members should be carefully involved, whether in clarity of roles, invitation to meetings, priority for travel, involvement in external meetings, introduction at Industry Briefings, etc.,

Differences between Advisors and Voting Members should be carefully defined and understood by all parties. Advisors to Air Force procurement boards are sometimes defined as ex-officio board members, where advisors for NASA boards are usually temporary and are generally experts brought in to resolve issues or to provide proposal evaluation. The expectations of each organization in utilizing advisors can be totally different. Careful discussion and definition should take place in order to clarify every board member's expectations before advisors are put to use.

8.0 SEB Training Observations

Key Board documents or strategies defined as a part of training should be clear beforehand. If something like a risk analysis is to be "the key driver" for critical evaluation products (e.g., SOO and SEB criteria), such training should be mandatory for key players. There should be some representation from the organization currently responsible for the functions, and its criticality to future acquisition effort should be stressed beforehand.

The training in "Past Performance Evaluation in Government Contracts" (provided by Federal publications, Inc.) was considered very beneficial to the successful performance of the PCAC. This just-in-time training, based on Office of Federal Procurement Policy and FAR 15 Rewrite, provided valuable insight into the structuring of the RFP sections L and M. The supplemental materials provided with this training were used throughout the evaluation process.

9.0 SEB Security Observations

Security rules should be established and enforced from the start; recorder (or single point contact) should be responsible for defining computer and security requirements. Procedures should be established for shared file configuration control and update, for notification of what is ready for Board review. Recorder should probably be responsible for secretarial staff so that tasks such as chart revisions, presentation copies, etc, can be balanced. (Secretaries can share many tasks that the Recorder assumed during ASM/ASP preparation, freeing him/her for higher-level work.)

All committees/groups should all be co-located within immediate proximity. Separating some committees/groups may be a nice "political" move but adds unnecessary communication and security issues. Geographical separation and transportation of materials increases the risk if accidentally misplacing and divulging proposal information.

10.0 Industry On-site Visits

Industry on-site observation days were very beneficial. They were scheduled on the web site, and bidders could pick the days they would participate.

Name tags should be assigned to visiting bidders.

Facility maps and directions should be complete.

It was helpful to the SEB to have management of the on-site visits be handled by non-PDT members. This assistance allowed the PDT to concentrate on SEB business.

It was found that parallel procurements affected some visiting bidders who had an interest in both. They complained about two different procurements scheduling the same day for observation visits. The government may need to be more aware of possible conflicts and advise bidders that separate proposal teams should cover conflicting observation opportunities.

11.0 Utilizing the Local Area Network, Web Site, and Internet

Use of the internal local area network was invaluable. The presentation electronics made it possible to quickly put up common displays of ideas and write-ups to the different teams for brain-storming, discussion, and improvement.

Any procurement team needs its own web site and administrator. Procurement team dependence on external management control of web site can lead to delays in getting releases out on the net. Web site administrators who are not members of the procurement team lose any sense of urgency that the document release might have. Only two people could make releases on the Kennedy web site, and if they are both on leave, the procurement release is delayed.

Adequate preparation and coordination are needed to assure linkage of procurement releases from the web site through the NASA Acquisition Information System.

The procurement team utilized a local area network (LAN) which was established within the building housing the team. The team was able to obtain sufficient desktop computing resources because of the fortunate arrival of a recent computer order. If not for that fortunate event, the team would have had to use other measures to locate computers. Officials establishing future procurement teams should assure that adequate computing resources are available.

Utilizing the internal LAN, the teams' documents could be e-mailed around for review and modification. Sometimes the process worked so rapidly that team members become confused about which version was the "latest and greatest." Most procurement team members are Type A's who want to press ahead. The LAN is a wonderful tool, but its speed and freedom allowed individuals to jump right in and begin work without being channeled into the correct document version. Nothing was lost, however, and after some initial confusion everyone got into the habit of double checking with the Board recorder who was established as the Configuration Manager for all documents. Adequate time should be taken to school the team that document configuration control

may reside with the Board reporter, but document control in a dynamic environment is everyone's responsibility.

The board Recorder is a very special position that requires someone with excellent administrative skills as well as a good understanding of the top level objectives.

Procurement Teams are sequestered. Likewise, the procurement LAN was not connected to the outside world. Connection to the wide area networks and the World Wide Web were via two separated computers, used on a first come, first serve basis. Bottlenecks were encountered when various team members needed to access the outside web site to stay attuned to the questions coming in from the prospective bidders or to utilize outside web connections as a tool in their daily work. This allocation of resources was too limited. The number of desktop processors that can access the Internet from inside the Board's facility should be carefully thought out. Future procurement teams need to plan for better access to the outside world via the networks.

After the Final RFP was released on the Web site, questions continued to come in from potential bidders. The questions were often referenced to sections that did not exist in the Final RFP. The team had to research back through the different pre-final versions of the RFP to tie the questions to the correct section or paragraph in order to correctly understand the questions' context. Also, Amendment 1 to the RFP was published with a Question & Answer Attachment. After publication, general use of the Attachment revealed that a question referenced a paragraph which no longer existed in the Final RFP. Again the importance of document configuration control was highlighted. A good backup solution in the event of a configuration lapse is to ask the bidders to append the document version and paragraph to their questions in order to help the team formulate answers without spending time researching RFP versions.

12.0 Joint Performance Management Office (JPMO) Set-up Effort

Since this procurement is a joint contract by two different government entities, it will be managed by a newly established Joint Performance Management Office (JPMO). This new management office is to be staffed and managed by both NASA and Air Force personnel. The Source Evaluation Board (SEB) management became responsible to set up this organization shortly before the proposals arrived for evaluation. The SEB management had to apply a great amount of time to establish the joint organization structure. The nature of this management organization is a massive change in responsibility and structure between the Air Force and NASA, and the time needed to establish the JPMO ate into the time the SEB needed to prepare the Evaluation Plan and to make final preparations for receiving proposals. Fitting together all the parts of this puzzle were a severe challenge. The rest of the procurement team continued the planning and preparation while the SEB management worked the JPMO structure. The quality and dedication of the procurement team personnel made it possible to free up the SEB management for this parallel task.

13.0 General Observations

13.1 Statement of Work and Work Breakdown Structure

The *key concepts* of performance-based contracting as prescribed in federal acquisition reform are: reduced compliance requirements, reduced reporting, and government insight in lieu of oversight.

A review of the current LBS and BOC contracts, which will be replaced by the J-BOSC, yielded 521 total compliance documents with 343 statutory and 178 non-statutory. The J-BOSC procurement achieved an overall reduction of 336 compliance documents, 206 statutory and 130 non-statutory. Reduced reporting requirements were also achieved. A review of the existing LBS and BOC contracts yields 370 contract deliverables required. The J-BOSC total list includes 17 deliverables of mostly financial and cost reports required for government budgeting and upward reporting to higher headquarters. A reduction from 370 to 17 is significant.

The *basic developmental elements* of performance based contracts are the contract statement of work, which is commonly referred to as the Performance Work Statement (PWS), and performance standards. In the J-BOSC RFP, the PWS is referred to as Technical Task Descriptor (TTDs). The TTDs and the related work breakdown structure were not made compliant to contract proposals. The idea was to clearly describe the tasks to be performed and clearly indicate the tasks to potential bidders without giving the impression of how the tasks were to be performed. The Procurement Development Team (PDT) chose to use the TTD terminology to emphasize the intent to change contract methodology with this acquisition. The PDT also wanted to give proposing Contractors maximum flexibility in proposal development by not prescribing the PWS structure or task descriptions to be followed. The TTDs are arranged in a work breakdown structure by category of work. They are a compilation of the tasks to be performed and the performance standards for each task. The standards include elements such as what, when, how many, and how well the work is to be performed. The TTD approach met the intent of the Office of Federal Procurement Policy (OFPP) guidance, except for the flexibility allowed regarding the adherence to the work breakdown structure, and deviation from holding the TTDs as a prescribed PWS. Without the deviation, the TTDs would represent a baseline of work to be performed by work breakdown structure element. Contractors could modify the tasks and standards in each element, but the proposal would have to maintain the work breakdown structure and identify the proposed task modifications. With the deviation, contractors are allowed to change the work breakdown structure and the tasks without identifying the changes. A technical library was also established to include Workload Indicators (WLI) that provided bidders with historical information concerning the frequency of occurrence and the duration of the tasks they would be required to perform.

If a hard and fast Work Breakdown Structure (WBS) had been provided in the RFP, then the perception would have been that the government had its mind made up about how the work should be organized and proposed. Instead, the government asked the bidders to submit their own definition of a Statement of Work and its attendant Work Breakdown Structure. Allowing this deviation increased the complexity of the evaluation process; however, this approach was to encourage the bidders to be more innovative in their approaches.

13.2 Performance Standards

The *hallmark* of a performance based statement of work is describing effort in terms of objective, measurable outputs. The TTDs and performance standards for the J-BOSC RFP comprises 20 pages of text. For comparison, the Statement of Work (SOW) for the current Launch Base Support (LBS) contract at CCAS is 255 pages, and the SOW for the Base Operations Contract (BOC) at KSC is 140 pages. By using performance based contracting concepts in developing the TTDs, the combined total of 395 pages in the current contract statements of work were reduced to 20 pages. The TTDs focus on task output in lieu of “how to,” and provide measurable performance standards for each task. This approach allows for shorter task descriptions and gives a clear description of

the work. The TTDs meet the Office of Federal Procurement Policy (OFPP) guidance for providing a description of work in objective, measurable tasks.

13.3 Evaluating Proposed Innovations

Where future RFPs ask for innovations, the proposal instructions should require the offeror to provide complete information to make possible a timely government evaluation. Proposed innovations tend to be outside, over and above, the RFP requirements. Unless otherwise instructed, the proposing Contractors may offer up one-liners that sound good, but the government may not have time nor criteria to properly evaluate the proposed innovation. Innovations raise the level of complexity of the evaluation process. As a minimum, the offerors should be instructed to provide cost of proposed innovation, benefit to the government, and an opinion as to whether or not the initiative is legal under the federal procurement regulations.

13.4 Cost Proposal Observations

The Business Committee observed that continued traffic of Resource Assessment Forms and Requests for Information Forms continued right up to the Initial Report. Little time was left to incorporate the last forms into the report. The work was rushed, and the possibility for error was greater. A cutoff time for these and any forms to be incorporated into the Initial Report needs to be established in order to give the system a chance to stabilize before preparation of the Cost Report.

Either the instructions for the Expenditure Profile Forms were not clear, or the offerors simply did not understand how to use them. The instructions and/or the intended use of this form needs to be revisited.

Costs should be structured at a much higher level on contracts of this size, or more people should be assigned to the business committee for cost preparation. Some members of the committee felt that the amount of data was overwhelming, but with additional time, they overcame the problem.

13.5 Mission Suitability Committee Observations

Members felt that evaluation assignments at sub-element levels should have been made before arrival of proposals. It was felt unrealistic for all team members to try to read and apply all management evaluation criteria to all proposals. Making the team members more narrowly focused at the beginning would have been more efficient. However, focused assignments such as these should not preclude the complete reading of all of the management proposals, because all members should have the complete management proposal well in mind for the purpose of meaningful team discussions.

The Staffing Plans with each proposal were not complete nor consistent with their corresponding Cost Proposals. Instructions might have been useful to require the offerors to indicate how they included the Workload Indicators in their staffing plans. Staffing rationale should have been required to show how Work Load Indicators were considered, included or discarded.

13.6 PRAG Committee Observations

The PRAG Committee should be renamed to be the Performance Confidence Assessment Group or Committee (PRAG/C) to be consistent with the change in the new procurement philosophy of changing from risk assessment to confidence assessment terminology. This change will avoid the confusion in the PRAG Committee name during presentations when all information is presented in the context of "Confidence Assessment" instead of "Risk Assessment."

Requesting past performance information from offerors in electronic format (CD-ROM) proved to be of little value to the PRAG. PRAG team meetings utilized hard copy information in the performance of the evaluation and consensus process.

13.7 Consideration of Plug Numbers

Serious consideration should be given to providing plug numbers for appropriate costs, even in performance contracts. For example, outside work, such as unpredicted customer support or facility projects, may not be controlled by the bidder. If the bidder fails to submit a reasonable cost or misses the cost altogether, unreasonable time may be spent debating a cost adjustment and a weakness in the bid. It is better provide a plug number for the bidder and concentrate on the bidder's proposed work management of the process.

13.8 Past Performance of the "Single Entity"

Serious thought should be given to the evaluation weight of past performance when bidders are asked to propose as a single organizational entity. When companies form teams to bid as a single entity, the resulting entity usually has no past performance to evaluate. The government may then decide to evaluate the teaming companies' individual past performance on relevant contracts.

Consider the following problem:
Consider that equal evaluation weight may be given to the evaluation factors of Mission Suitability, Past Performance, and Cost. Now consider that the proposal evaluations result in very close scores in the factors of Mission Suitability and Cost. The Source Selection Official now has the factor of Past Performance to sway the decision. The bid having the highest Past Performance score may result from high marks of the component companies and not from any past performance of the bidding entity. There is no real history of how the component companies will perform as a team on the contract.

The Procurement Development Team should give serious consideration to how Past Performance will be weighted and how teaming companies will be evaluated. It is important to have these decisions made early and to communicate them to prospective bidders.

14.0 Acronyms

45^{TH} SW	45^{TH} Space Wing
ASM	Acquisition Strategy Meeting
ASP	Acquisition Strategy Panel
ASPP	Acquisition Strategy Planning Process
BOC	Base Operations Contract (at Kennedy Space Center)
CCAS	Cape Canaveral Air Station
J-BOSC	Joint Base Operations & Support Contract
JPMO	Joint Performance Management Office
KSC	Kennedy Space Center
LBS	Launch Base Support Contract (at CCAS)
NASA	National Aeronautics & Space Administration
OFPP	Office of Federal Procurement Policy
O&M	Operations & Maintenance
PAFB	Patrick Air Force Base
PBC	Performance Based Contract
PDT	Procurement Development Team
PCAC	Performance Confidence Assessment Committee
RFP	Request For Proposal
SEB	Source Evaluation Board
SEP	Source Evaluation Plan
SOO	Statement of Objectives
SOW	Statement of Work
SSA	Source Selection
SSAC	Source Selection Advisory Council
TTD	Technical Task Descriptors
WBS	Work Breakdown Structure
WLI	Work Load Indicators

STATEMENT OF OBJECTIVES (SOO)

CONTRACT FORMAT

STATEMENT OF OBJECTIVES (SOO)

SECTION C: DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

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SECTION C: DESCRIPTION OF WORK

C.1 GENERAL INFORMATION

C.1.1 Intention**.** The intention of this solicitation is to obtain integrated support services including facilities, utilities, supply, transportation, grounds care, refuse disposal, custodial and security at !INSERT CENTER/INSTALLATION NAME! by means of a combination firm fixed-price, indefinite quantity, and cost reimbursable contract.

C.1.2 Specification. This is an outcome-based specification. Broad contract objectives are stated in terms of required outcomes. More specific service outcomes and related performance expectations are specified for each functional area. Tasks to be performed and methods of performance required to achieve the outcomes and objectives are not specified. The requirements cited do not attempt to describe work that is inherent in the performance of the contract. It is the Contractor's responsibility to propose a complete statement of requirements, in contractually enforceable language, such that the Government can, by acceptance of the offer, award a contract. Best judgment shall be used by the offeror to develop a performance based Statement of Work (SOW) covering all requirements set forth in this solicitation and in applicable compliance documents. The SOW and proposal shall incorporate management and technical processes the offeror considers will offer the "best value" package of services to the !INSERT CENTER/ INSTALLATION! for achieving the contract objectives stated herein. This SOW shall be developed and submitted in accordance with the directions in Section L.

C.1.3 Description.

!**********
NOTE TO SPECIFICATION WRITER: The intent of the outcome contract approach is to allow contractors much greater freedom and flexibility to propose methodologies and technologies for satisfying the outcome requirements. The contractor community needs an understanding of the installation's business and mission-related environment in order to develop innovative and non-traditional proposals. This subsection should be used to provide a brief description of the mission with specific emphasis and detail regarding mission characteristics that are most related to the facilities and services covered by this contract. Major "drivers" of requirements and costs for this overall contract scope should be identified in this subsection directly or by reference to more detailed exhibits in J attachments. These "drivers" (factors that affect the demand for services on a contract-wide basis) might include such factors as installation population with any meaningful subdivisions; quantity and other characteristics of activities such as space launches and airfield landings and takeoffs; number and type of tenants; utilities consumed; laboratory space. Other factors such as weather patterns, environmental conditions, physical characteristics, operational limitations, and cultural-economic setting may also be important to an adequate understanding of the circumstances in which the services will be delivered. Factors that primarily influence only one or a few service areas should be presented in those annexes. The objective in this subsection is to identify and describe contract-wide influences on service demands and performance requirements.
**********!

C.1.3.1 !INSERT CENTER/INSTALLATION NAME! Mission.

!INSERT MISSION DESCRIPTION!

C.1.3.2 Facilities and Support Service Drivers.

!INSERT FACILITY AND SUPPORT DRIVER DESCRIPTIONS!

C.1.3.3 Physical Characteristics.

!INSERT DESCRIPTION OF CENTER/INSTALLATION PHYSICAL CHARACTERISTICS!

C.1.3.4 Operational Constraints.

!INSERT DESCRIPTION OF OPERATIONAL CONSTRAINTS!

C.1.3.5 Historical Workload Data. The historical workload data in this solicitation relates to the services and methods used in the past to provide the outcomes described in this specification. The Contractor is not required to use these methods or this exact set of services except where required by statute, regulation or specifically identified as a requirement in this subsection. The Government is not contracting for this historical level of service, but for the best value package of goods and services which will provide maximum support to the !INSERT CENTER/ INSTALLATION NAME ! at the least cost.

END OF SUBSECTION C.1

C.2 CONTRACT OBJECTIVES

C.2.1 General Objective. The purpose of this Center Operating Support Services (COSS) contract is to provide integrated support services to the !INSERT CENTER/INSTALLATION NAME! in support of its mission as !INSERT BRIEF MISSION DESCRIPTION!. The overall objective is to provide reliable, responsive and cost effective facilities and services to !INSERT CENTER/ INSTALLATION NAME! and its' customers and tenants. This objective will be accomplished through a management approach that demands flexibility and innovation in the face of changing requirements and funding limitations. The COSS Contractor shall employ innovative and effective management to assure:

- System dependability
- Resource protection
- Proactive and interactive customer support
- Visionary planning leading to cost reductions and improved infrastructure effectiveness
- Statutory and regulatory compliance, and
- Continuous focus on the stated outcomes that define mission success.

The Government and the Contractor will enter into a partnership to foster open communications and collaboration to constantly clarify mission support needs and to evaluate and promote successful Contractor performance.

C.2.2 Specific Objectives.

C.2.2.1 Management Approach. The Contractor shall implement a management program that will provide superior support for the !INSERT CENTER/INSTALLATION NAME! mission and maximize the level of service and support to the customer community within limits of affordability. This program shall:

- Employ an innovative, entrepreneurial, and efficient management approach challenging the status quo and traditional methods in formulating and delivering high quality, timely and cost-effective support services.
- Implement management strategies that produce an effective response to rapid changes and emergency situations while avoiding or minimizing additional cost through the prudent adjustment of service performance levels.
- Incorporate quality concepts in all aspects of the operations, placing highest value on cost reduction without mission support degradation.
- Monitor performance through meaningful indicators that assist management in its' efforts to continuously improve processes.
- Practice dynamic planning, balancing short-term service delivery efficiencies with longer-range actions for improved mission support at a lower cost.
- Achieve common support practices and systems that provide services to multiple customers.

C.2.2.2 Business Approach. The Contractor shall apply a business approach based on stewardship, flexibility, cost effectiveness, and best business practices. The business program shall:

- Embody sound financial management concepts that result in affordable costs while continuously improving mission and customer support.
- Identify and implement cost savings in the firm fixed-price (FFP) portion of the contract through utilization of the Cost Savings Initiatives clause (!INSERT CLAUSE NUMBER!). Cost Reduction Proposals shall address: concept, savings, impact to mission, risk assessment, probability of success, and the implementation plan.
- Identify and implement cost savings through operating efficiencies and the long-term reduction of government infrastructure investment. Incorporate financial management strategies to minimize cost increases when emergencies or rapid changes occur.
- Implement a program that recruits and selects qualified subcontractors, maximizes the use of commercial services and emphasizes meaningful subcontracting or employment opportunities to achieve the COSS socio-economic procurement goals.

C.2.2.3 Communications. The Contractor shall maintain effective lines of communication with all elements of the !INSERT CENTER/INSTALLATION NAME! and its' customers to ensure flexible, effective support. The Contractor shall:

- Proactively participate in defining issues, devising solutions to problems and developing future plans.
- Develop and deploy an effective customer satisfaction program through the use of "listening and learning" techniques and customer feedback mechanisms that resolve daily problems, leading to long-term process improvements.
- Manage relationships with local governments, agencies, businesses, and community organizations to enhance contract effectiveness and promote a favorable image of the !INSERT CENTER/INSTALLATION NAME!-Contractor partnership.
- Implement a management information system providing accessible, accurate, complete and current information involving the management of this contract.
- Inform all customers of changes in level of service or routine before they occur via the Contracting Officer.

C.2.2.4 Performance. The Contractor shall ensure systems integrity and reliability, mission readiness, and service affordability. Specifically:

- Attain customer confidence that systems work and services will be provided, when needed.
- Provide technically competent personnel to accomplish all contract tasks in a manner that supports the !INSERT CENTER/INSTALLATION NAME! mission.
- Maintain a safe and secure operating environment.
- Achieve cost reductions while maintaining required level of mission support services.
- Be flexible and innovative in the protection and preservation of physical assets and the environment.
- Assure customer satisfaction at all stages of work from requirement development through service delivery.

C.2.3 Contract Performance Standards. The following table identifies the standards of performance relative to this Subsection.

ITEM NO.	CONTRACT REQUIREMENT	INDICATOR	STANDARD
C.2.3.A	Provide reliable and cost effective facilities and services at !INSERT CENTER/INSTALLATION NAME!	1. Mission schedule 2. Customer satisfaction 3. New customers and mission growth	a. No mission schedule impact due to action or inaction of the Contractor. b. Customers are satisfied that overall support is adequate and costs are reasonable; mission programs do not suffer from insufficient support or growth in costs c. New customers and expanded missions are attracted to the !INSERT CENTER/INSTALLATION NAME!
C.2.3B	Achieve flexibility and responsiveness to multiple customers with competing demands.	Customer satisfaction	Customers are satisfied with overall service priorities
C.2.3C	Provide cost savings to the government without adverse impact on !INSERT CENTER/ INSTALLATION NAME! mission performance.	Government costs	a. Direct costs for contract services are lower as a result of Contractor initiated or recommended actions. b. Overall government costs for infrastructure maintenance and operations are lower as a result of Contractor initiated or recommended actions.
C.2.3D	Provide responsive planning and work control to all customers	Customer satisfaction	a. Customers are satisfied with work management system. b. Management and work information systems are user friendly and provide required customer data as needed.

END OF SUBSECTION C.2

C.3 GENERAL REQUIREMENTS.

C.3.1 Management and Control. The Contractor shall provide management and control as necessary to provide support services at !INSERT CENTER/ INSTALLATION NAME! that achieve the contract objectives, outcomes and requirements described herein.

C.3.1.1 Operation Procedures Plan (OPP). The Contractor shall provide, prior to the contract start and then annually thereafter, an Operation Procedures Plan (OPP) for all contract services for each contract period. The OPP for each year shall include the following:

- A summary of the work performed during the past year (after base period)
- An evaluation of the performance success measures and trends
- An assessment of current facilities condition and analysis of risk to mission accomplishment and safety
- A recommended five-year plan of major maintenance.

C.3.1.2 Management Analysis Summary. The Contractor shall submit a quarterly Management Analysis Summary, within !INSERT NUMBER! days following the end of each fiscal Quarter, keyed to the OPP that, as a minimum, provides a narrative and data as necessary to address:

- Existing or potential violations of public statute
- Existing or potential violations of mandatory regulations or industry practices affecting the health or safety of personnel or property
- Conditions or trends indicating potential failure or disruption of services affecting mission readiness
- Cost to deliver services
- Status of cost reduction strategies
- Any other technical, managerial, or financial analyses that prudent management would require for current operations and long-range planning; and
- Recommendations for remedial action for any of the above-cited conditions.

!**********
NOTE TO SPECIFICATION WRITER: Most Centers/Installations now have CMMS capability. Centers/Installations may require the Contractor to use or at least populate their government-owned CMMS. Alternatively, the Center/Installation may allow the Contractor to use the Contractor's own system, as long as the Government's CMMS is still maintained and there is clear understanding that the data and reports required by this contract remains the property of the Government. Use of the same database(s) by the Center/Installation and the Contractor will improve data accuracy and communications while supporting the partnering relationship desired. Two paragraph options are provided below for consideration and revision as appropriate to satisfy individual Center/Installation situations and desires.
!**********

!SELECT EITHER C.3.1.3 (OPTION 1) OR C.3.1.3 (OPTION 2)!

C.3.1.3 OPTION 1. Computerized Maintenance Management System (CMMS) The Contractor shall provide a controlled-access, (network accessible) on-line, interactive Computerized

Maintenance Management System with the ability for users to read and download data and to construct and execute ad hoc queries and custom reports with current and historical data. The CMMS shall have the basic attributes of a Computerized Maintenance Management System as described in Appendix E of NPG 8831.2 (series) and shall apply, as appropriate, to the total scope of this contract. Data shall be compatible with !INSERT MICROSOFT, MAXIMO OR OTHER! software products. All data and reports generated and/or required in support of this contract are the property of the Government and shall be turned over to the Contracting Officer at the completion or termination of the contract. The Contractor shall develop and maintain user's guides and training for Government and Contractor user access to on-line management information systems and databases. The CMMS software and hardware shall be offered to a successor contractor at a fair market price.

C.3.1.3 OPTION 2. Computerized Maintenance Management System (CMMS) The Contractor shall operate the Computerized Maintenance Management System (CMMS) now in place at !INSERT CENTER/ INSTALLATION NAME! and described in Attachment J-C3.1. All additional software and hardware required for Contractor operation shall be provided by the Contractor and shall be approved by the Contracting Officer before installation. The Contractor may utilize another computerized system for its contract management but shall remain fully responsible for maintenance of the !INSERT CENTER/ INSTALLATION NAME! CMMS. All data and reports generated and/or required in support of this contract are the property of the Government and shall be turned over to the Contracting Officer at the completion or termination of the contract.

C.3.1.4 Facility History Files. The Contractor shall maintain facility history files for each building, structure, system or piece of equipment identified by a facility number. The Section C subsections contain references to attachments in Section J where buildings, structures, systems or pieces of equipment are listed.

C.3.1.5 Reports. The Contractor shall generate, maintain and process data, and provide reports to the Government as specified in this solicitation. Reports and/or supporting backup data shall be submitted in an electronic format.

C.3.1.6 Data Collection. !INCLUDE IF APPLICABLE! Collect and input required data into government management information systems and databases to support government reporting requirements.

C.3.1.7 Support. The Contractor shall support meetings, working groups, briefings, inspections, and prepare, maintain, submit or make accessible records, reports, and data associated with all work requirements.

C.3.1.8 Quality Control. The Contractor shall establish, implement and maintain a proactive quality control program that reflects and incorporates the quality processes and quality management practices described in the technical proposal.

C.3.1.9 Staffing. The Contractor shall provide a qualified staff to perform the specified services. The Contracting Officer shall approve all replacements for key personnel.

C.3.1.10 Citizenship. All Contractor and subcontractor employees working on the !INSERT CENTER/ INSTALLATION NAME! must be citizens or legal residents of the United States.

C.3.1.11 Conformance. The Contractor shall conform to all Federal, state and local statutes and shall follow all applicable NASA regulations. The Contractor is expected to assist !INSERT CENTER/INSTALLATION NAME! with obtaining waivers from NASA regulations where such waivers will allow the Contractor to operate more efficiently and effectively. References applicable to the entire contract are listed in Attachment J-H1. References that are specific to a service area will be identified within that subsection.

C.3.1.12 Records. The Contractor shall update the drawings, records, manufacturer's equipment manuals, history files, and other pertinent data turned over to the Contractor, as applicable, to reflect all changes implemented by the Contractor during the contract period.

C.3.1.13 Disruptions. The Contractor shall notify the !SELECT FACILITY MANAGER, COTR, CONTRACTING OFFICER, ETC.! at least !INSERT NUMBER – CONSIDER CAREFULLY AND SET MINIMUM ACCEPTABLE! working days in advance of any work to be performed in a building !INSERT under the manager's control – IF APPLICABLE! that would tend to disrupt the conduct of normal Government business. Prior approval shall be obtained from the Contracting Officer, except in emergencies, for work requiring the shut-down of equipment for more than !INSERT NUMBER! minutes during regular work hours. In cases where shutdown is necessary, the Contractor shall coordinate the shutdown with the !INSERT-FACILITY MANAGER OR OTHER, AS APPLICABLE! in the affected building.

C.3.1.14 Cooperation. The Contractor shall cooperate with all other contractors and avoid conflicts with other contractors' performance and work schedules. Under no circumstances shall additional work be performed at the request of another contractor without approval of the Contracting Officer.

C.3.2 Financial Management. The Contractor shall employ best business practices in the sound financial management of total contract costs, while responding to the financial reporting needs of the government.

!**********
NOTE TO SPECIFICATION WRITER: The financial reporting requirements should be considered carefully with an eye to ensuring that only essential and useful data and information are identified. The most benefit can be obtained from an outcome contract approach when services are fixed-price to the maximum practicable. When fixed-price services must be broken-down by fund sources or customers, the Contractor can be required to allocate an invoice amount to each fund or customer. In the fixed-price environment detailed job order accounting may be inappropriate since we have not required pricing by individual job or by labor, material, etc. However, the Contractor can be required to report invoice amounts by fund type, customer, or similar classification. Actual costs of the Contractor may be proprietary data depending on the level of detail or the nature of the breakout. The contractor system for allocation must be reasonable and periodic Quality assurance (QA) can assure it is being followed. Attachment J-C3.1 in the following clause should describe the financial data required in "outcome" terms.
**********!

C.3.2.1 Integrated Financial Management. The Contractor shall provide an integrated financial management system capable of interfacing with the CMMS. The cost accounting codes defined in the NASA Facility Management Handbook - Agency-wide Coding Structure (FMM 9100) Functional Management System (FMS) shall be used. Accounting shall be consistent with all reporting requirements and detailed enough to capture costs for tenants and customers, provide budget and program data, and develop re-solicitation data. Attachment J-C3-1 describes financial reporting requirements.

C.3.2.2 Tracking Report. The Contractor shall submit a monthly financial tracking report that satisfies Attachment J-C3.1 with, and to be considered a part of, the monthly payment invoice.

C.3.3 Safety and Health. The Contractor shall demonstrate proactive and aggressive safety practices in performing contract work. All work shall be conducted in accordance with OSHA requirements. Prior to contract start, the Contractor shall demonstrate to the Contracting Officer an effective safety and health program.

C.3.4 Environmental Protection. The Contractor shall comply with all applicable Federal, state, and local laws, regulations and standards. Hazardous and combustible materials shall be handled and stored in accordance with these requirements and to avoid spills or creation of nuisance conditions. Material Safety Data Sheets (MSDS) shall be maintained for all materials for which they are applicable. Refrigerants shall be captured and recycled in conformance with all applicable laws and regulations**.**

C.3.5 Emergency Preparedness and Operations. The Contractor shall continue contract performance during all emergency situations and support the !INSERT CENTER/ INSTALLATION NAME! emergency operations. The Contractor shall submit an Emergency Preparedness and Operation Plan that addresses the means to prevent and limit damage and assure continued operation of !INSERT CENTER/INSTALLATION NAME! during emergency situations such as severe weather, fire, earthquakes, loss of utilities, acts of terrorism, and loss of contractor personnel due to strikes or illness. The Emergency Preparedness and Operation Plan shall be submitted prior to contract start. If an emergency condition occurs, the Contractor shall divert the Contractor workforce, or such part thereof as the Contracting Officer deems necessary, from its normal duties to prevent or limit damage and perform any cleanup or recovery. Emergency preparedness and operations is included in the fixed-price portion of the contract. Work to restore and repair facilities following the emergency, and not performed by personnel while diverted from other fixed-price tasks, shall be performed as trouble calls or Indefinite Delivery and Indefinite Quantity (IDIQ) work depending on the estimated cost.

C.3.6 Audits and Inspections. The Contractor shall provide assistance and cooperation for all authorized inspections, internal reviews, and audits conducted by the Government that involve matters related to facilities and services in this contract.

!**********
NOTE TO SPECIFICATION WRITER: The Contractor should be self-sufficient, and furnishing any Government property to the Contractor is *highly* discouraged. It is good policy NOT to furnish the Contractor any Government property or at least to minimize it to the greatest extent possible. Select either Paragraph C.3.7 (Option 1) or C.3.7.(Option 2), modified as necessary.
**********!

C.3.7 (Option 1). Government Furnished Property and Services. The Contractor shall provide all facilities, equipment, and materials for the Contractor's use in connection with this contract.

C.3.7 (Option 2) Government Furnished Property and Services. In accordance with the "GOVERNMENT PROPERTY (FIXED-PRICED CONTRACTS)" clause in Section I, the Government will provide certain Government owned !MODIFY AS REQUIRED! facilities, equipment, and materials for Contractor use only in connection with this contract. All such facilities, equipment, and materials will be provided in "as is" condition. When no longer required or at the completion of the contract, all government furnished facilities, tools and equipment shall be returned to the Government in the same condition as received, except for reasonable wear and tear, and approved modifications and alterations.

C.3.7.1 Government Furnished Facilities (GFF). The Government will furnish or make available to the Contractor the facilities described in Attachment J-C3.2. Should the Contractor choose to use the Government furnished facilities, adequate precautions shall be taken by the Contractor to ensure their safe, sanitary and appropriate use. The Government will be responsible for normal structural and systems maintenance and repair. The Contractor shall obtain written approval from the Contracting Officer prior to making any modifications or alterations to the facilities, and such modifications or alterations will be made at the expense of the Contractor.

C.3.7.2 Installation Accountable Government Property (IAGP). The Government will provide the Contractor the use of existing and available Government owned tools and equipment in the performance of this contract. Such Government furnished tools and equipment are listed in Attachment J-C3.3. The Contractor shall perform periodic servicing, maintenance, and repairs on IAGP chosen for use under this contract. IAGP that is damaged beyond repair or worn out, due to normal use, shall be returned to the Government. Replacement shall be the responsibility of the Contractor and the equipment will remain Contractor property. Upon completion or termination of the contract, all Government furnished tools and equipment shall be returned to the Government in the same condition as received, except for normal wear and tear.

C.3.7.2.1 Fuel. The !INSERT “Government will” OR “Contractor shall”! provide fuel required for the operation of vehicles and equipment used in the performance of this contract. !INSERT IF THE GOVERNMENT PROVIDES FUEL, “The Contractor shall keep a record of fuel used by each vehicle and all major equipment for the Contracting Officer’s periodic review.”!

C.3.7.2.2 Joint Inventory. The Contractor and the Contracting Officer shall conduct a joint inventory during the phase-in period of this contract to determine the exact number and serviceability of Government furnished tools and equipment chosen by the Contractor. The Contractor shall then certify the findings of this inventory, assume accounting responsibility.

!SELECT EITHER C.3.7.3 OR C.3.7.3 (OPTIONAL)!

C.3.7.3 Government Furnished Material (GFM). The Government will furnish the material described in Attachment J-C3.4 to the Contractor on a one-time basis. Should the Contractor choose to use the Government furnished material, a joint inventory shall be conducted with the Contracting Officer before contract start. The Contractor shall maintain documentation supporting use of such material. On completion of this contract a second joint inventory shall be conducted, if

necessary, of all unused Government furnished materials prior to returning the unused materials to the Government.

!**********
NOTE TO SPECIFICATION WRITER: The intent of the following optional paragraph is for the Government to provide the Contractor a minimum initial issue of critical, hard to come by spare parts. The Contractor is then required to maintain no less than the specified quantity of these critical spare parts on hand at all times so that repairs to critical equipment and systems will not be delayed by long material delivery lead times. Typical critical reserve items include out of stock components on very old mechanical equipment that need to be specially produced by the manufacturer.
**********!

C.3.7.3.1 (OPTIONAL) Critical Reserve Items. Experience has shown that selected items of long lead time parts and materials must be stocked to ensure repair of critical equipment in the event of failure. A list of these critical reserve items and minimum stocking levels is contained in Attachment J-C3.4. The Government will provide to the Contractor an initial issue of items in at least the minimum quantities listed. The Contractor shall maintain at least the minimum quantity of all the items specified during the contract term. The Contractor shall only use these items in the maintenance and repair of the facilities and systems as follows:

- Critical reserve items shall be used on the systems, facilities, or equipment with which they are associated.
- A replacement critical reserve item shall be ordered within !INSERT NUMBER! working days after the use of any critical reserve item that causes the total quantity on hand to fall below the minimum specified level. The cost of replacement of all critical reserve items is included in the firm fixed-price.
- On completion of the contract, all critical reserve items shall be returned to the Government in at least the minimum specified quantities.

C.3.7.3 (OPTIONAL) Government Furnished Material (GFM). The Government will not provide any Government furnished materials except for critical reserve items. Experience has shown that selected items that are essential or critical to the operation of a facility and/or are long lead time parts and materials must be stocked to insure repair of critical equipment in the event of failure. A list of these critical reserve items and minimum stocking levels is contained in Attachment J-C3.4. The Government will provide the Contractor an initial issue of items in at least the minimum quantities listed in Attachment J-C3.4. The Contractor shall conduct an inventory (utilizing the Government's inventory of the materials) during the phase-in period of this contract to confirm the exact number of critical reserve items. The Contractor shall then certify the findings of this inventory and assume accounting responsibility for all the critical reserve items. The Contractor shall maintain at least the minimum quantity of all the items specified. These items shall be used by the Contractor in the maintenance and repair of the facilities/systems only as follows:

- Critical reserve items shall be used on the systems, facilities, or IAGP with which they are associated as shown in Attachment J-C3.4 unless directed otherwise by the Contracting Officer.
- A replacement critical reserve item shall be ordered within !INSERT NUMBER! working days after the use of any critical reserve item that causes the total quantity on hand to fall below the minimum specified level.

- On completion or termination of the contract, all critical reserve items shall be returned to the Government in at least the minimum specified quantities.

C.3.7.4 Availability of Utilities. The Government will furnish the utility services at existing outlets for the Contractor's use in those facilities provided by the Government for the work performed under the contract, including !ADD OR DELETE AS APPROPRIATE! electricity, data and voice communications, steam, natural gas, potable water, sewage service, and refuse collection (from existing collection points). The Contractor shall provide and maintain the necessary service lines from the existing Government outlets to the work site.

C.3.7.4.1 Utilities specified above will be furnished at no cost to the Contractor.

C.3.7.4.2 Existing telephone connections for Contractor use on official contract business only will be furnished by the Government.

C.3.7.4.3 The Government will furnish existing electronic data connections for Contractor use on official contract business only.

C.3.7.4.4 The Government will provide internal (within the !INSERT "Center" OR "Installation"!) mail service.

C.3.8 Contractor Furnished Items. Except for items listed in Subsection C.3.7, *Government Furnished Property and Services,* the Contractor shall provide all facilities, equipment, materials, and services to perform the requirements of this contract.

C.3.8.1 Parts, Components, and Materials/Supplies. The Contractor shall provide new or factory reconditioned parts and components when providing maintenance, repair, alteration and construction services as described herein. All replacement units, parts, components and materials/supplies used in the performance of the contract shall be compatible with the existing equipment on which it is to be used; shall be of equal or better quality than original equipment specifications; and shall comply with the applicable contract specifications. As a minimum, the following part types are considered under the provisions of this instruction: bearings, washers, rivets, rings, spacers, studs, pins, valves, springs, and threaded fastening devices. Parts and components, once installed in the Government facility, become Government property. Items not listed in the technical specifications shall be of acceptable industrial grade and quality. If the original manufacturer has updated the quality of parts for current production, parts supplied under this contract shall equal or exceed the updated quality. The Contractor shall obtain and maintain manufacturer's operating instructions and maintenance manuals on all new equipment installed by the Contractor. These documents shall become property of the Government and shall be turned into the Contracting Officer within !INSERT NUMBER! working days after completion or termination of the contract.

3.8.1.1 Equipment. New, replacement and rebuilt equipment shall conform to the applicable contract specifications. When purchasing equipment, the Contractor's equipment procurement specification shall include the applicable clauses from Attachment J-C16.

3.8.1.2 Phase-In Period Materials Option. At the start of this contract the Government may have some materials other than critical reserve items available from the previous contract. Within !INSERT NUMBER! calendar days from start of the phase-in period, the Government will make

available to the Contractor an inventory of these materials including the stock number, item description, quantity, and the Government's acquisition cost. The Contractor shall have the option of purchasing this material at the Government's acquisition cost shown on the inventory. No later than !INSERT NUMBER! calendar days prior to start of the contract the Contractor shall provide the Contracting Officer a list of the material items the Contractor will purchase. The items not purchased by the Contractor will be removed and disposed of by the Government prior to the start of the base period of the contract. The total purchase price of the materials to be purchased by the Contractor will be deducted from the first billing period.

C.3.9 Security. The Contractor shall comply with !INSERT CENTER/INSTALLATION NAME! security regulations and instructions. Ensure that Contractor personnel do not present security problems. Internal procedures shall be established to control Government furnished property.

C.3.10 Standards. Work shall meet the standards specified herein and shall conform with accepted standards and codes of the craft and industry; equipment manufacturers technical data; all applicable NASA, local, state, and Federal standards; and all applicable nationally recognized building and safety codes.

C.3.11 Mobilization. The Contractor shall be prepared to perform fully on the contract start date all work requirements. The phase-in period shall start immediately after contract award and continue until contract start. During the phase-in period, the Contractor shall have access to the facilities and areas covered by this contract, access to !INSERT CENTER/INSTALLATION NAME! personnel, and allowed to observe all operations. Costs for this phase-in period shall be included in the firm fixed-price.

C.3.12 Demobilization. Prior to the expiration of this contract, after selection of a successor contractor, the incumbent contractor and the successor contractor shall jointly prepare a mutually agreeable detailed plan for approval by the Contracting Officer for the phase-out of the incumbent contractor and the phase-in of the successor contractor. The Contractor agrees to provide these phase-out/phase-in services at least !INSERT NUMBER! calendar days following award of the new, follow-on contract and prior to the expiration of this contract.

C.3.13 Hours of Operation. General administrative hours for !INSERT CENTER/ INSTALLATION NAME! are !INSERT TIME! to !INSERT TIME! daily, Monday through Friday, excluding Federal holidays. Hours of operation for the Contractor will be as necessary to meet the established performance goals. Shift work is currently required for many services in this contract for essential mission support operations. The Contractor shall schedule and arrange work so as to have the least interference with the normal operation of the !INSERT CENTER OR INATALLATION!.

C.3.14 Test and Airfield Areas. Prior to assignment to work in test and airfield areas Contractor employees shall attend a !INSERT NUMBER! hour field indoctrination course provided by the Government for instruction on the proper use of radio communications equipment and airfield and test area operation procedures. All persons driving or working in airfield areas shall maintain continuous radio contact with the control tower. Two-way radios will be provided and maintained by the !INSERT "Government" OR "Contractor"!. Entry to and exit from airfield areas shall be made only from the locations and along routes designated in Attachment J-C3.5. Access to test areas is also controlled and restricted. The Contractor shall coordinate work schedules in test areas

with !INSERT THE APPROPRIATE FACILITY MANAGER, COTR, CONTRACTING OFFICER, ETC!

C.3.15 Technical Definitions and Acronyms. See Attachment J-2 for technical acronyms and definitions applicable to the entire contract. Acronyms and definitions applicable only to a specific functional area are contained in that subsection.

END OF SUBSECTION C.3

C.4 PERFORMANCE METHODS AND PROCEDURES.

C.4.1 General. Traditionally, the Government has contracted for work defined by the performance methods described below with performance standards such as response and completion times, labor hour and cost limits, and other requirements assigned to the methods. In this outcome-based specification the Government is contracting for outcomes and results not directly defined by these performance method. These methods will, however, continue to be used to price and order work in the contract. The Contractor shall select work methods and processes and identify management standards and requirements in the SOW it determines to be best suited to achieve the contract objectives and services outcomes. The Government shall monitor the broader service outcomes.

C.4.2 Trouble Calls.

C.4.2.1 Scope. Trouble calls are the method of response and performance for minor facility problems or reactive maintenance work. This category is composed of two types:

- Emergency trouble calls are those which require rapid action to prevent loss of or damage to !INSERT CENTER/ INSTALLATION NAME! property, to restore essential services that have been disrupted, to eliminate hazards to personnel or equipment or affect the operation of critical equipment or systems.
- Routine calls are minor facility problems that do not require emergency response.

Generally, trouble calls up to !INSERT DOLLAR AMOUNT- $2,000! are included in the firm fixed price of the contract for each functional service area. However, when the trouble call involves non-recurring maintenance and repair of buildings, building systems, utilities systems, and other facilities and structures, the Contractor's fixed price cost limits will be determined by specific criteria described in subsections C.8, C.9 and C.10. Historical data on trouble calls received and their classification are set forth in Attachment J-C4.1. The actual scope of trouble call work may vary from this historical data. The information included in the attachment may be used, in conjunction with the offeror's concept of operations and experience as a service provider, to formulate the appropriate level of service, methods of performance, and price.

C.4.2.2 Procedure. Generally, occupants of a facility, the Facility Managers or maintenance workers initiate trouble calls. The Contractor shall establish a work reception procedure for around-the-clock trouble call receipt. Emergency call work shall be continuous until the emergency condition is arrested without regard to the trouble call limit. Emergency work beyond the !INSERT DOLLAR AMOUNT - $2,000! limit will be authorized and paid under the indefinite quantity portion of the contract. See subsection C.8, C.9 and C.10 for the specific requirement regarding non-recurring maintenance and repair of buildings, building systems, utility systems and other facilities and structures. Trouble call data shall be entered into the Computerized Maintenance Management System (CMMS).

!**********

NOTE TO SPECIFICATION WRITER: Nearly all service requests are for work that should be funded by the requestor. Many of these requests may be for relatively small work items such as relocating or installing an electrical outlet or moving furniture between offices. It is time consuming and costly to process each request as an IDIQ work package. The following paragraph specifies all service requests costing less than the trouble call dollar limit are part of the firm, fixed price and thus avoids individual IDIQ work processing. Requestors, through authorized

representatives, would contact the Contractor work reception directly. To simplify funding by requestors, it is suggested that reimbursable users fund service requests in advance. The estimated amount for a fiscal quarter, or longer period, would be based on historical or other data.. The financial reporting requirements in C.3.2 and J-C3.1 would identify the need for the Contractor to allocate the fixed price invoice amount for service requests each month by requestor/customers. The Contractor, if specified, could manage the accounts and report available balances. The suggested $2,000 cost limit could be higher or lower based on an analysis of historical data.
**********!

C.4.3 Service Requests.

C.4.3.1 Scope. Service requests are the method of performance for minor work, other than maintenance and repair, that is new in nature. The work may be alteration, construction or involve services. Examples are relocating an electrical outlet, installing new cabinets, moving office furniture and support for an outdoor ceremony. Service requests up to !INSERT DOLLAR AMOUNT-$2,000! are included in the firm, fixed price of the contract. Requests for alteration, construction and services that cost more than !INSERT DOLLAR AMOUNT-$2,000! will be accomplished as IDIQ work.

C.4.3.2 Procedure. Service requests are for discretionary work and will be initiated by an authorized government representative. The Contractor shall establish work reception and control procedures that assure service requests are not accomplished without authorization. Historical data on service requests are set forth in Attachment J-C4.1. The actual scope of service request work may vary from this historical data. The information included in the attachment may be used, in conjunction with the offeror's concept of operations and experience as a service provider, to formulate the appropriate level of service, methods of performance, and price. Should the quantity or the average size of service requests vary substantially from the Attachment J-C4.1 data over each 12-month period after contract start, an equitable adjustment may be necessary.

C.4.4 Recurring Work.

C.4.4.1 Scope. All work included in the firm, fixed-price portion of the contract is recurring work (trouble calls and service requests are special subsets). Based on the data provided and the Contractor's experience and expertise, the Contractor shall determine the technical and management methods required to achieve the specified contract objectives and outcomes. It is expected this will involve methods and techniques similar to those traditionally involved in recurring work that can be scheduled or is predictable, and required resources to accomplish the recurring work can be reasonably estimated. Preventative Maintenance historical data is provided in Attachment J-C4.2.

C.4.4.2 Procedure. Work, necessary to achieve the contract objectives and outcomes, will usually be initiated by the Contractor in accordance with the approach and methods set out in the Contractor developed SOW. Schedules and criteria will be in the SOW or prepared later based on SOW requirements and operating plans. Some schedules and criteria are specified in this solicitation. Schedules and records regarding work performance shall be entered in the CMMS in accordance with the SOW.

!**********
NOTE TO SPECIFICATION WRITER: All work specified in the following clauses, where the cost of the labor portion of the work exceeds $2,000, is subject to Davis-Bacon wage provisions. See the User's Guide for a more detailed discussion regarding Davis-Bacon wage provisions.
**********!

C.4.5 Non-Recurring (Indefinite Delivery/Indefinite Quantity (IDIQ)) Work.

C.4.5.1 Scope. All work not included in the firm, fixed-price portion of the contract is non-recurring. An Indefinite Delivery/Indefinite Quantity (IDIQ) work package is the method by which the Contractor shall perform facilities maintenance, repair, alterations and construction and all other services when the work is not included in the firm, fixed-price portion of the contract. No single IDIQ work package shall be performed in this contract that exceeds a total cost of !INSERT DOLLAR LIMIT, IF DESIRED!. The Contractor shall be paid the negotiated fixed-price for each IDIQ work package based on prices in the Schedule of Prices for IDIQ Work in Section B. Most IDIQ work will be classified as routine and shall be completed within !INSERT NUMBER! calendar days of receipt. Some IDIQ work shall require performance during a specific period or completion by a specific date. When such specific performance requirements make it necessary, the COTR and the Contractor shall negotiate completion dates. Historical data on IDIQ work is contained in Attachment J-C4.3.

C.4.5.2 Procedure.

C.4.5.2.1 Pricing Work. IDIQ work in the contract shall be priced using the following methods that shall be applied in the order listed.

!**********
NOTE TO SPECIFICATION WRITER: All of the pricing methods described below may not be useful to the Center/Installation unless it is anticipated that a significant quantity and variety of IDIQ work will be required. If expected requirements are limited and reasonably defined by a small number of unit priced tasks, it may be easier for the statement of work to have only those tasks and their respective fixed, unit priced labor costs in Schedule B.
**********!

C.4.5.2.1.1 Unit Priced Tasks. The unit priced work items include all direct and indirect costs including labor, material, tools and equipment, overhead, G&A and profit, necessary to perform one unit of each of the tasks in the Section B *Schedule of Prices*. IDIQ Work Packages may be issued using unit priced tasks only or in combination with unit priced labor.

C.4.5.2.1.2 R. S. Means Coefficient Factor. The Contractor's price for doing work not included in the Unit Price Tasks shall be determined by applying the coefficient from Schedule B to the bare costs for material, labor and equipment to do a unit of work described in the appropriate Means cost data publication. The coefficient factor shall be a "decrease" (e.g. 0.80) or "increase" (e.g. 1.20) from the Means bare costs for material, labor and equipment and shall reflect the Contractor's productivity and other cost factors, including all indirect costs, overhead, G&A and profit. There will be a single coefficient for maintenance and repair work and another for alteration and construction work as set forth in Section B. Maintenance and repair work is described in the R. S. Means *Facilities Maintenance and Repair Cost Data 19XX"* and construction and alteration work in *"Facilities Construction Cost Data 19XX."*

C.4.5.2.1.3 Fixed Labor Rates. Work that is not covered by unit priced tasks or the R. S Means Cost Data books shall be priced using fixed labor rates and adjusted bare costs of materials and equipment. Labor rates and coefficient factors for adjusting materials and equipment bare costs are set forth in the *Schedule of Indefinite Quantity Work - Fixed Labor Rates* in Section B. The labor rates shall include all costs to provide an hour of the specified craft including benefits and payroll taxes and assessments, and all overhead, G&A and profit. The materials and equipment coefficient is "net" and includes all indirect costs, overhead, G&A and profit.

C.4.5.2.2 Ordering Work.

C.4.5.2.2.1 Scope of Work. The Contracting Officer will provide the Contractor a scope of work and request a cost proposal. A joint site visit may be conducted with a representative of the Contracting Officer. The Contractor may provide recommendations for revisions, alternative methods or deviations from the Government scope of work, including descriptions, drawings, or sketches, and technical specifications. All recommended changes shall be submitted to the Contracting Officer within !INSERT NUMBER! working days after the site visit. After any recommended changes are evaluated and incorporated, the Contracting Officer will issue a revised scope of work and request for cost proposal.

C.4.5.2.2.2 Price. The Contractor's cost proposal shall be completed and returned to the Contracting Officer within !INSERT NUMBER! working days after receipt of the request for proposal. The estimate shall be developed as follows:

- For the work covered in the unit priced tasks, apply the unit price to the number of estimated units.
- Where unit prices do not apply, the appropriate Means cost data publication shall be used to determine the bare cost of a unit of work. The bare cost shall be adjusted by the Weighted Average City Cost Index for the !INSERT CENTER OR INSTALLATION! location (in the Reference section of the Cost Data publication) and the Contractor's coefficient factor.
- For work tasks not covered by unit prices or R. S. Means Cost Data, fixed labor hour rates shall be used. Estimated labor hours shall be multiplied by the appropriate rate. Material prices obtained from recognized supplier catalogs or competitive quotes shall be adjusted using the Contractor's coefficient. Only rental equipment needed for work, with or without operator, shall be included in the price by applying the Contractor's coefficient to the catalog or price quote. Equipment that is included in the Contractor's normal fleet shall not be priced separately and shall be presumed to be a part of the Contractor's indirect costs. Operators for such equipment shall be included as fixed rate labor.

C.4.5.2.2.3 Issue IDIQ Work Package. Based on the Contractor's proposal, the Contracting Officer will negotiate any areas of difference in pricing with the Contractor. The approved statement of work and price will be issued as a fixed-price IDIQ Work Package for the work described and in accordance with the *Ordering of Work* clause in Section G.

END OF SUBSECTION C.4

C.5 ENGINEERING SERVICES

C.5.1 Objectives.

C.5.1.1 Engineering services fully support the mission and base operations of the !INSERT CENTER/INSTALLATION NAME!.

C.5.1.2 Real property planning and management continuously reduce excess infrastructure quantity and unit costs of ownership.

C.5.2 Requirements

C.5.2.1 Scope. The Contractor shall provide engineering services to support facility planning, design, and construction at !INSERT CENTER/INSTALLATION NAME!.

C.5.2.1.1 Facility Planning**.** Provide management, transactions, physical inventory and accounting for all real property on !INSERT CENTER/INSTALLATION NAME!, including instruments such as leases, permits, rights of entry, easements and licenses. Maintain a utilization inventory for all facilities and develop a Facility Consolidation and Reuse Plan, including the Demolition and Disposal Program. Operate a comprehensive customer interface program to include information, orientation, and a facility customer's guide. Monitor facilities not in use and provide a listing of facility customers. Develop, update, maintain, and revise plans, information guides, airfield waivers and maps. Perform field surveys, siting approval, excavation permits, updating Master Plan documentation, cartographic support, Geographical Information System (GIS) support, and Geographic Information Management System (GIMS) support. Prepare and update annually, a five-year facilities projects program and a 20-25 year Facility Master Plan, for facility and infrastructure improvement, modernization, and major repair. Serve as the coordinating agency for all space allocation activities.

C.5.2.1.2 Engineering and Construction Services. Provide design and engineering services to support facility projects and related engineering studies required for program development. Provide construction management services, surveying, and project scheduling for government initiated construction projects. Perform all aspects of construction management, and acceptance of construction contracts implemented by others and assigned to the contractor for construction services. Perform facilities, systems, and equipment cost estimating and cost engineering services to support construction activities.

C.5.2.2 Specific Outcome Requirements. The Contractor's proposed statement of work (SOW) shall be designed to meet the following specific outcome requirements and standards.

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C. 5 4.2A	Engineering services fully support the mission of ! !INSERT CENTER/ INSTALLATION NAME!!.	Customer input	a. No mission delays due to engineering services actions or inaction b. No more than !INSERT NUMBER – SUGGEST BASE ON ESTIMATED VOLUME OF ENGINEERING SERVICE ACTIONS/ PROJECTS! valid unsatisfactory incidents per fiscal quarter
C. 5 4.2B	Real property planning and management continuously reduce both excess infrastructure quantity and unit costs.	Amount of infrastructure and cost of ownership	Declining annual trend in both the amount of excess infrastructure and the unit cost of ownership (maintenance and repair).
C. 5 4.2C	Facility Project Program is consistent with !INSERT CENTER/INSTALLATION NAME! vision, long range plans, and fiscal projections.	Customer input	a. Program is acceptable at all reviews b. No adverse consequences from planning actions or inaction
C. 5 4.2D	All real property data, records, maps, documents, and reports are prepared and/or maintained accurately and on schedule.	1. Timeliness 2. Accuracy	a. 90% of changes posted on a continuous basis with no required change taking more than 45 calendar days to post. b. 97% of real property activities during a six-month period shall be completed correctly the first time.
C. 5 4.2E	Designs and cost estimates meet acquisition cost targets and are completed in accordance with program schedule.	1. Accuracy 2. Timeliness.	a. Engineering design cost estimates accurate to 90% of actual acquisition costs. b. Engineering design completion rate 98% of program schedule.
C. 5 4.2F	Construction is accomplished on schedule and within awarded costs.	1. Timeliness 2. Cost control.	a. Schedule is within 2% of awarded schedule b. Cost is within 5% of awarded price

!**********
NOTE TO SPECIFICATION WRITER: When considered necessary, specific detailed work tasks or specific task-level performance standards may be specified. These are tasks that are viewed as so critical to mission success, safety or are of such high visibility that Contractor discretion with the performance method will not be permitted. It must be recognized that the government reduces the Contractor community flexibility and assumes greater risk, as the work specification becomes more specific. A specific work method, response time or frequency are examples of the type of requirements that may be specified in this Paragraph.
**********!

C.5.2.3 Specific Output Requirements. The following specific outputs are mandated for this work function. These requirements are in addition to other tasks and methodologies proposed by the Contractor in the SOW to meet the outcome objectives.

C.5.2.3.1 Operation Procedures Plan. The Contractor shall develop an Operation Procedures Plan for providing engineering service. The Plan shall be developed using the following guidelines: (1) existing Center/Installation facility planning, engineering and construction management services procedures, (2) Center's/Installation's SPECSINTACT, (3) Government procurement and acquisition regulations, (4) the Center's/Installation's Facilities Master Plan, and (5) the Directives/Reference and Manuals/Publications listed in Attachment J-H1. The procedures shall cover:

- Receipt and processing of facility planning requests and project work statements
- Resource identification and approval
- Design package processing
- Project status reporting
- Record keeping and documentation
- Project coordination
- Government progress reviews and approval
- Resolving technical issues, and
- Any other appropriate procedures for standardizing the processing of these services in as simple a manner as feasible.

C.5.2.3.2 Timeliness - !EXAMPLE! All siting approval packages shall be prepared within !INSERT NUMBER! working days of request receipt.

C.5.3 Contract Pricing. Contract pricing for work in this subsection (C5) is:

WORK CATEGORY	FIXED PRICE	INDEFINITE QUANTITY
Facility Planning	X	
Engineering for Maintenance and Repair Projects	X	
Engineering for Alteration and Construction Projects		X
Engineering for all Projects funded by !INSERT NAME! customers		X

C.5.4 Definitions and Acronyms. See Attachment J-2

C.5.5 Current Situation

!**********
NOTE TO SPECIFICATION WRITER: Describe briefly in this subsection, using Section J attachments for more detailed listings, procedures and descriptions, the situation in which the performance now occurs. This includes the usual inventory and workload data. Also use this subsection to highlight any significant factors that affect the performance. This may be the in-house and contract interface during performance; types of service recipients and any special demands; pattern of service demands; other contracts that interface; etc. Add additional paragraphs as needed to describe these factors.
**********!

The information contained and referenced in this subsection relates to the methods used by the Government in the past or currently to provide engineering services. The Contractor is not required to use these methods except where required by statute, regulation and/or specifically specified in this subsection.

C.5.5.1 !INSERT DESCRIPTIONS OF CURRENT CONDITIONS AS NEEDED!

C.5.5.2 Workload Data. The historical workload data in Attachment J-C5.1 relates to the services and methods used in the past to provide the outcomes included in this subsection. The Contractor is not required to perform in the same manner so long as the outcomes are obtained and all statutory, regulatory or specifically identified requirements are achieved. The information included in the attachments may be used, in conjunction with the offeror's concept of operations and experience as a service provider, to formulate the appropriate level of service and methods of performance.

C.5.6 Records, Reports, and Deliverables. Attachment J-C5.2 lists those records and reports currently maintained and prepared. The Contractor is expected to propose those records and reports considered necessary to perform the engineering services function and achieve the required results in the SOW. The Contractor is expected to develop the necessary rationale to assist !INSERT NASA CENTER/INSTALLATION NAME! with obtaining waivers from reporting requirements by NASA and others where such waivers will reduce contract costs.

C.5.7 References**.** All work performed by the Contractor shall conform to the latest issue of Federal and local laws, OSHA regulations, industry standards, and other applicable regulations, directives and instructions including, but not limited to, those in Attachment J-H1.

!**********
NOTE TO SPECIFICATION WRITER: The following paragraph is suggested if it is considered necessary to specify minimum qualifications for any personnel. Generally, with an outcome-based solicitation, the Contractor would be free to use personnel as desired and would be expected to comply with any legal or regulatory requirements without it being specifically stated.
**********!

C.5.8 Personnel Qualifications. The Contractor shall provide personnel that have the technical and management knowledge and skills to perform the engineering and related services required. Personnel shall have the education, training, licenses, certifications and experience required by federal, state and local authorities and at least equal to prevailing industry practice. Specific requirements for certain personnel are in Attachment J-C5.3.

END OF SUBSECTION C.5

C.6 ENERGY AND WATER CONSERVATION

C.6.1 Objectives.

C.6.1.1 Energy and water needed to accomplish base operations and the mission of the !INSERT CENTER/INSTALLATION NAME! shall be reduced to the lowest level practicable consistent with mission performance and environmental standards.

C.6.1.2 Energy and water consumption is in full compliance with the *National Energy Conservation Policy Act (NECPA)*, as amended by the *Energy Policy Act of 1992*, subsequent Executive Orders and memoranda, and NASA directives including NPD 8800.16, *NASA Environmental Management*, NPG 8820.1B, *Facilities Maintenance and Energy Management Handbook*, and NPG 8800.17, *Energy Metrics for NASA Facilities*.

C.6.2 Requirements.

C.6.2.1 Scope. The Contractor shall implement an integrated program of energy and water conservation in accordance with federal, state and local laws and regulations and NASA policies.

C.6.2.1.1 Energy efficient operations encompass all activities which consume or affect the consumption of non-renewable energy resources that are controlled completely or in part by the Contractor and include utilities generation and delivery, building operations and maintenance, and transportation services. Performance of these activities shall require the smallest quantity and lowest cost of energy resources practicable without mission support degradation.

C.6.2.1.2 Energy conservation management services encompass those activities which consume or affect the consumption of non-renewable energy resources that are controlled by the !INSERT CENTER/INSTALLATION NAME! or tenants and customers of the !INSERT CENTER/ INSTALLATION NAME! and include mission operations, administrative and personnel support, other contractor operations, and government procured energy resources. A proactive conservation management program shall provide technical and engineering services, education and awareness support, and monitoring and analysis.

C.6.2.1.3 Water conservation operations encompass all activities which consume or affect the consumption of water resources that are controlled completely or in part by the Contractor and include utilities generation and delivery, building operations and maintenance, and grounds care. Performance of these activities shall require the smallest quantity and lowest cost of water practicable while meeting mission and center support needs and complying with applicable laws and regulations.

C.6.2.1.4 Water conservation management services encompass those activities which consume or affect the consumption of water that are controlled by the ! INSERT CENTER/INSTALLATION NAME! or tenants and customers of the center and include mission operations, administrative and personnel support, other contractor operations, and government procured water. A pro-active conservation management program shall provide technical and engineering services, education and awareness support, and monitoring and analysis.

C.6.2.2 Specific Outcome Requirement. The Contractor's proposed statement of work (SOW) shall be designed to meet the following specific outcome requirements and standards:

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.6.2.2A	Energy and water consumption to generate and deliver utilities service is reduced	Energy and water consumption	Annual decrease from baseline year (adjusted for additional commodity demand).
C.6.2.2B	Reduce end-use utility consumption by customers	Utility commodity consumption	Annual decrease from baseline year (adjusted for additional consumers).

!**********
NOTE TO SPECIFICATION WRITER: When considered necessary, specific detailed work tasks or specific task-level performance standards may be specified. These are tasks that are viewed as so critical to mission success, safety or are of such high visibility that Contractor discretion with the performance method used will not be permitted. It must be recognized that the government reduces the Contractor community flexibility and assumes greater risk, as the work specification becomes more specific. A specific work method, response time or frequency are examples of the type of requirements that may be specified in this paragraph.
**********!

C.6.2.3 Specific Output Requirements. The following specific outputs are mandated for this work function. These requirements are in addition to other tasks and methodologies proposed by the Contractor in the SOW to meet the outcome objectives.

C.6.2.3.1 The approach to be used in achieving the energy and water conservation objectives and requirements at ! INSERT CENTER/INSTALLATION NAME! shall be documented in an Operations Plan for Energy and Water Conservation. The plan shall be submitted for government approval no later than !INSERT NUMBER! calendar days after contract start. The plan shall describe the strategies, techniques, methods, and procedures to be employed and identify the criteria the contractor will use to measure performance. This plan shall also contain conservation support for consumer activities other than those incorporated in the following plans:

- Incorporate that portion pertaining to operation, maintenance and repair of buildings into the Operations and Maintenance Plan required by Paragraph C.8.2.3.1.
- Incorporate that portion pertaining to operation, maintenance and repair of utilities systems into the Operations and Maintenance Plan required by Paragraph C.9.2.3.1.
- Incorporate that portion pertaining to transportation services into the Supply and Transportation Operations Plan required by Paragraph C.15.2.
- Incorporate that portion pertaining to grounds care into the Grounds Care Plan required by Paragraph C.11.2.3.1.

C.6.3 Contract Pricing. All work in this subsection shall be firm, fixed price except technical and engineering service for energy and water conservation projects funded by !INSERT CENTER/INSTALLATION NAME! Customers.

C.6.4 Definitions and Acronyms. See Attachment J-2.

C.6.5 Current Situation.

!**********
NOTE TO SPECIFICATION WRITER: Describe briefly in this subsection and refer to J-C attachments for more detailed listings, procedures and descriptions, the situation in which the performance now occurs. Highlight the significant factors that affect the performance. Information and data regarding types and sources of energy and water "coming over the fence"; the use of energy and water as an input to produce a utility commodity such as steam, chilled water, etc.; unusual demands; patterns of demands; contracts; methods of measuring usage; are examples that may be included here and in accompanying J-C attachments
**********!

The information contained in this subsection relates to the methods used by the Government in the past or currently to perform the services required. The Contractor is not required to use these methods except where required by statute, regulation and/or NASA directive.

C.6.5.1 !INSERT DESCRIPTIONS OF CURRENT CONDITIONS AS NEEDED!

C.6.5.2 Workload Data. The historical workload data in Attachment J-C6.1 relates to the services and methods used in the past to provide the outcomes included in this subsection. The Contractor is not required to perform in the same manner so long as the outcomes are obtained and all statutory, regulatory or specifically identified requirements are achieved. The information included in the attachment may be used, in conjunction with the offeror's concept of operations and experience as a service provider, to formulate the appropriate level of service and methods of performance.

C.6.6 Records, Reports and Deliverables. Attachment J-C6.2 lists those records and reports currently maintained and prepared. The Contractor is expected to propose those records and reports considered necessary to perform the energy and water conservation function and achieve the required results in the SOW. The Contractor is expected to identify and develop the necessary rationale to assist !INSERT CENTER/INSTALLATION NAME! with obtaining waivers from reporting requirements by NASA and others where such waivers will reduce contract costs.

C.6.7 References. All work performed by the Contractor shall conform to the latest issue of Federal and local laws, OSHA regulations, industry standards, and other applicable regulations, directives and instructions including, but not limited to, those in Attachment J-H-1.

END OF SUBSECTION C.6

C.7 ENVIRONMENTAL SUPPORT SERVICES

C.7.1 Objectives.

C.7.1.1 Mission performance and base operations of the !INSERT CENTER/INSTALLATION NAME! are in compliance with Federal, state, local environmental laws and regulations and NASA environmental policies and regulations.

C.7.1.2 Environmental services are managed and performed in an efficient and cost effective manner to fully support the mission of !INSERT CENTER/INSTALLATION NAME!.

C.7.2 Requirements.

C.7.2.1 Scope. The Contractor shall provide environmental services to support the mission and operations of !INSERT CENTER/INSTALLATION NAME! and ensure compliance with all environmental laws and regulations.

C.7.2.1.1 Hazardous and Controlled Waste. Provide management and operations to include:

- Hazard determination, pick-up, storage, and preparation for off-site shipment for treatment and disposal of hazardous and controlled waste (medical and non-medical).
- On-scene command and performance of spill and release response, post-emergency clean-up, decontamination, neutralization, and disposal of hazardous substances, and
- Hazardous waste minimization.

C.7.2.1.2 Hazardous Material. Provide management of a comprehensive hazardous material program to include:

- Records, reports, and other program administration
- Technical assistance to !INSERT CENTER/INSTALLATION NAME!, the Hazardous Materials Control Board (HMCD)(See Attachment J-C7.1), and users and handlers of hazardous materials
- Development of strategies, plans, and procedures.

C.7.2.1.3 National Pollutant Discharge Elimination System (NPDES) and Storm Water Management. Perform management and operations to ensure compliance with NPDES and prevent storm water pollution.

C.7.2.1.4 Asbestos and Lead. Perform management and operation of an asbestos and operations and maintenance program to ensure compliance with applicable laws and regulations and the protection of personnel from asbestos and lead hazards.

C.7.2.1.5 Universal Waste. Management of a universal waste program to ensure compliance with applicable Federal, state and local laws and regulations, including management and operation of a recycling program for universal waste. Universal waste includes batteries and battery cells, aerosol cans, florescent bulbs, printed circuit boards, and photo, x-ray and printing wastes !ADD OTHERS IF APPLICABLE!.

C.7.2.1.6 Sanitary Landfill. Provide management and operation oversight of the sanitary landfill at !INSERT CENTER/INSTALLATION NAME! to meet the !INSERT CENTER'S OR INSTALLATION'S! requirements and to ensure operational and environmental compliance with pertinent Federal, state and local laws and regulations.

C.7.2.1.7 Environmental Support Services. Provide environmental support services to !INSERT CENTER/INSTALLATION NAME! for technical support of environmental programs. Services include:

- Training of !INSERT CENTER/INSTALLATION NAME! and tenant personnel as required to comply with Federal, state and local laws and regulations
- Technical regulatory consultation for NASA Environmental Office interfacing with regulatory agencies
- Emissions monitoring
- Inspection of regulated facilities and systems
- Preparation of permit applications, reports, and other documents required by regulation
- Support of government initiatives such as pollution prevention, waste reduction, Superfund Amendment and Reauthorization Act (SARA) and Toxic Release Inventory (TRI) reporting, recycling and affirmative procurement.

C.7.2.2 Specific Outcome Requirement. The Contractor's proposed statement of work (SOW) shall be designed to meet the following specific outcome requirements and standards:

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.7.2.2A	!NSERT CENTER/ INSTALLATION NAME! operations are in compliance with Federal, state, and local environmental laws and regulations.	Statutory and regulatory deficiencies	No notices of violation or other deficiencies
C. 7.2.2B	Environmental services supports achievement of the !INSERT CENTER/ INSTALLATION NAME! mission.	1. Mission program scopes, budgets and schedules 2. Customer satisfaction	Mission programs are not adversely affected by environmental matters that could have been avoided or anticipated from Contractor actions
C. 7.2.2C	Environmental reports, permits and other regulatory documents, including NEPA documentation, are prepared as negotiated to meet customer needs.	1. Timeliness 2. Quality 3. Customer satisfaction	a. Meet negotiated schedule b. No more than one rework in six month period c. Mutually agreed customer requirement is achieved

C. 7.2.2D	Hazardous and controlled waste operations satisfy customer requirements.	Customer satisfaction	Mutually agreed customer requirements are met
C. 7.2.2E	Spill and release response and emergency containment and cleanup are timely and effective.	1. Timeliness 2. Effectiveness	a. Response is within Operations Plan criteria b. Operations plan procedures are followed; actions meet expectations of industry and regulatory experts for similar situations

!**********
NOTE TO SPECIFICATION WRITER: When considered necessary, specific detailed work tasks or specific task-level performance standards may be specified. These are tasks that are viewed as so critical to mission success, safety or are of such high visibility that Contractor discretion with the performance method will not be permitted. It must be recognized that the government reduces the Contractor community flexibility and assumes greater risk, as the work specification becomes more specific. A specific work method, response time or frequency are examples of the type of requirements that may be specified in this paragraph.
**********!

C.7.2.3 Specific Output Requirements. The following specific outputs are mandated for this work function. These requirements are in addition to other tasks and methodologies proposed by the Contractor in the SOW to meet the outcome objectives.

!INSERT DESIRED OUTCOMES!

C.7.2.4 Environmental Operations Plan. The Contractor shall document the approach to be used in achieving the Environmental Support Services requirements at !INSERT CENTER/ INSTALLATION NAME!. The plan shall describe the methods, procedures, schedules and contingency measures to be employed and identify the performance criteria the Contractor will use to measure performance. This plan shall be submitted for government approval not later than !INSERT NUMBER – SUGGEST 45! days after contract start.

C.7.3 Contract Pricing. All work in this subsection shall be firm, fixed price except post-emergency clean-up, decontamination, neutralization, and disposal of hazardous substances needed after spills or releases.

C.7.4 Definitions and Acronyms. See Attachment J- 2

C.7.5 Current Situation

!**********
NOTE TO SPECIFICATION WRITER: Describe briefly in this subsection the situation in which the performance now occurs and refer to J-C attachments for more detailed listings, procedures and

descriptions. This includes inventories and other workload data. Also use this subsection to highlight any significant factors that affect performance. This may be information such as the in-house and contract mix of performance; types of service recipients and any special demands; pattern of service demands; agreements with state and local agencies; other contracts that interface; etc. Add additional paragraphs as needed to describe these factors.
**********!

The information contained and referenced in this subsection relates to the methods used by the Government in the past or currently to provide environmental services. The Contractor is not required to use these methods except where required by statute, regulation and/or specifically specified in this subsection.

C.7.5.1 !INSERT AS NEEDED TO DESCRIBE CURRENT SITUATION!

C.7.5.2 Workload Data. The historical workload data in Attachment J-C7.2 relates to the services and methods used in the past to provide the outcomes included in this subsection. The Contractor is not required to perform in the same manner so long as the outcomes are obtained and all statutory, regulatory or specifically identified requirements are achieved. The information included in the attachment may be used, in conjunction with the offeror's concept of operations and experience as a service provider, to formulate the appropriate level of service and methods of performance.

C.7.6 Records, Reports, and Deliverables. Attachment J-C7.3 lists those records and reports currently maintained and prepared. The Contractor is expected to propose those records and reports considered necessary to perform the environmental services function and achieve the required results in the SOW. The Contractor is expected to identify and develop the necessary rationale to assist !NSERT CENTER/INSTALLATION NAME! with obtaining waivers from reporting requirements by NASA and others where such waivers will reduce contract costs.

C.7.7 References. All work performed by the Contractor shall conform to the latest issue of Federal and local laws, OSHA regulations, industry standards, and other applicable regulations, directives and instructions including, but not limited to, those in Attachment J-H-1.

!**********
NOTE TO SPECIFICATION WRITER: The following paragraph is suggested if it is considered necessary to specify minimum qualifications for any personnel. Generally, with an outcome-based solicitation, the Contractor would be free to use personnel as desired and would be expected to comply with any legal or regulatory requirements without it being specifically stated.
**********!

C.7.8 Personnel Qualifications. The Contractor shall provide personnel that have the technical and management knowledge and skills to perform the environmental engineering and related services required. Personnel shall have the education, training, licenses, certifications and experience required by federal, state and local authorities and statute and at least equal to prevailing industry practice. Specific requirements for certain personnel are in Attachment J-C7.4.

END OF SUBSECTION C.7

C.8 BUILDINGS AND STRUCTURES OPERATIONS, MAINTENANCE AND REPAIR

!**********
NOTE TO SPECIFICATION WRITER: Marine Structures include specialized facilities such as wharves, docks, piers, and navigational locks as well as passive construction such as groins, seawalls and levees, all of which have objectives and requirements common to buildings and structures shown below. If the Center/Installation has these types of facilities, and if the Contractor is expected to monitor and maintain them, the Specification Writer should consider including them in this Buildings and Structures subsection or, alternatively, in the Roads and Surface Area or Grounds Maintenance subsections (C.10 and C.11, respectively), as appropriate for the specific Center/Installation and contract scope.

Interior pest control is included in this Buildings and Structures subsection. Refer to Subsection C.11, *Grounds Maintenance*, for the control of exterior pests.
****

C.8.1 Objectives.

C.8.1.1 Buildings and structures, including installed equipment and systems, are available and fully functional and operational to the user when needed for mission operations.

C.8.1.2 Operation, maintenance, repair, construction and alteration of buildings and structures are affordable and provide the best life cycle cost value.

C.8.2 Requirements.

C.8.2.1 Scope. The Contractor shall provide for the operation, maintenance, repair, construction and alteration of buildings and structures, including building-type and collateral equipment and other facility components at !INSERT CENTER/INSTALLATION NAME!. Equipment and systems include:

- Heating, ventilation and air conditioning
- Security and fire alarms
- Cranes and hoists
- Elevators
- Other built-in or large substantially affixed equipment

Facility components include the following and similar installed and attached features:

- Interior and exterior walls and appurtenances
- Wall coverings and trim
- Floors and floor coverings
- Ceiling systems
- Windows and doors (manual and mechanical)
- Restroom fixtures
- Piping and plumbing systems
- Lighting and electrical systems
- Roofing systems
- Structural systems

C.8.2.1.1 Operations. Establish operating criteria and standards and perform the starting, stopping, inspection, monitoring, adjusting, testing and data recording, as applicable, of the facilities systems and equipment and the related control systems to achieve the standards

C.8.2.1.2 Maintenance. Perform work required to preserve a facility in the condition that it may be effectively utilized for its designated purpose. Both recurring and non- recurring maintenance work are included. Recurring maintenance is the systematic day-to-day, scheduled activities such as preventive maintenance, Predictive Testing and Inspection, pest control, crane load tests, roof gutter and downspout cleaning intended to retain function. Non-recurring maintenance is unscheduled actions taken to prevent malfunction or failure. An example of non-recurring maintenance is replacement of a system component that tests indicate will fail soon.

C.8.2.1.3 Repair. Perform work that is required to restore a facility, facility component or collateral equipment, to a condition substantially equivalent to its originally intended and designed capacity, efficiency or capability. Repair is associated with taking remedial action after malfunction or failure.

C.8.2.1.4 Alteration. Perform work to change the configuration (not maintenance or repairs) but not increase the value of the facility, e.g. moving a door or an electrical outlet.

C.8.2.1.5 Construction. Perform work to erect, install, or assemble (1) a new replacement facility, or (2) an addition in area, volume, or both to an existing facility. These are activities that are not required to preserve or restore a facility.

C.8.2.2 Specific Outcome Requirement**.** The Contractor's proposed statement of work (SOW) shall be designed to meet the following specific outcome requirements and standards:

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.8.2.2A	Buildings, structures and systems are available and functional when needed.	1. Incidents of non-availability or reduced functionality	100% availability and functionality for critical facilities
		2. Number of failures and malfunctions	Number does not exceed historical data
		3. Customer feedback	No more than !INSERT NUMBER – SUGGEST IT BE BASED ON OVERALL SIZE OF CENTER/ INSTALLATION, NUMBER OF USERS, BUILDINGS, SYSTEMS, ETC. A HIGHER STANDARD INCREASES COSTS! substantiated customer complaints. !THIS

			STANDARD WILL BE THE PRINCIPAL EVALUATION FOR NON_CRITICAL FACILITIES!
C.8.2.2B	Pests are controlled within interior areas	1. Customer input 2. Incidents of infestation and sightings	a. Customers are satisfied with the pest management program underway b. Declining customer complaints and service calls
C.8.2.2C	Operation, maintenance and repair are affordable	1. Costs of major repair 2. Utilities consumption 3. Customer input	a. Declining cost trend for major repair b. Declining consumption trend for utilities c. Customers are satisfied that costs are reasonable .
C.8.2.2D	Minimize impact on operations from trouble call problems	Customer feedback	No more than !INSERT NUMBER! substantiated customer complaints concerning response time or effectiveness.

!**********!

NOTE TO SPECIFICATION WRITER: When considered necessary, specific detailed work tasks may be specified. These are tasks that are viewed as so critical to mission success, safety or are of such high visibility that Contractor discretion with the performance method used will not be permitted. It must be recognized that the Government reduces Contractor risk when the work specification becomes more specific while the Contractor's opportunity to propose alternate methods with possible lower cost and/or improved quality is constrained. The following are examples.

**********!

C.8.2.3 Specific Output Requirements. The following specific outputs are mandated for this work function. These requirements are in addition to other tasks and methodologies proposed by the Contractor in the SOW to meet the outcome objectives.

!NOTE - THE FOLLOWING ARE EXAMPLES:!

C.8.2.3.1 Operation Procedures Plan. Prior to Contract start, the Contractor shall submit, for government approval, an Operation Procedures Plan that describes the Contractor's approach and methodology for the operation and maintenance of all buildings, structures and related equipment and systems. The plan shall specifically address the following:

- Work Control procedures and CMMS

- Operational criteria
- Techniques and procedures to be applied in meeting operational criteria
- Preventive Maintenance (PM) checklists and schedules where used
- Energy and water conservation (see C.6.2.3.1)
- Performance measures for evaluating success of the operations and maintenance plan.

C.8.2.3.2 Predictive Testing and Inspection. The Contractor shall have Predictive Testing and Inspection (PT&I) capability that shall be used in the Contractor's maintenance program for the equipment and systems !INSERT- "listed in Attachment J-C8.2" OR "identified as critical in Attachment J-C8.2"!

C.8.2.3.3 Emergency Trouble Calls. Emergency trouble calls shall be received and responded to 24 hours a day, seven days per week. Response time shall be within !INSERT NUMBER! minutes.

C.8.2.3.4 Locksmith Services. Locksmith services shall be available on-call 24 hours a day, seven days a week. Response time shall be within !INSERT NUMBER! minutes !OR HOURS!.

C.8.2.3.5 Integrated Pest Management Plan. Prior to contract start, the Contractor shall submit, for government approval, an Integrated Pest Management Plan that addresses the use of appropriate technological and management techniques to obtain pest prevention and suppression in a cost effective, environmentally sound manner. See also Paragraph C.11.2.3.2 for exterior pest control.

!**********
NOTE TO SPECIFICATION WRITER: The fixed price cost limit amounts shown in Paragraph C.8.3 are examples to portray the concept of shared responsibility between Government and Contractor for facility condition and reliability. The relative values ($500 and $2,000) are the approximate lower limits necessary for the concept to be effective. The Center/ Installation should analyze historical data on this type of work, evaluate the results, and select appropriate amounts that will serve as the fixed price limit for the various situations and types of work. It is important that the limit be high enough to motivate contractor performance but not so high as to drive up the price or discourage offerors.
**********!

C.8.3 Contract Pricing. The following table summarizes the various work types and the pricing mechanism for each. This pricing strategy is designed to give the Contractor an incentive to develop and perform a proactive and effective program of operations, PM and other maintenance techniques such as predictive testing. The Contractor remains responsible for the cost limits when the total cost of correction and repair exceeds the limit. The cost responsibility limit provides a reasonable risk sharing between the Government and the Contractor. As a further means of risk sharing, the cost limit for repair does not apply:

- For the first 6 months of the contract when lower limits are set to allow a reasonable time for the Contractor's program to be established.

- If the Contractor has identified to the Government the need for specific maintenance, prior to failure, that requires Government funding and that requirement has not been funded.

WORK TYPE	FIXED PRICE	INDEFINITE QUANTITY	REMARK
Operations	X		
Recurring maintenance	X		
Non-recurring maintenance <$500	X		
Non-recurring maintenance >$500		X	
Repair <$500	X		During first six months of the contract
Repair >$500		X	During first six months of the contract: Contractor responsible for first $500
Repair <$2,000	X		After first six months of the contract
Repair >$2,000		X	After first six months of the contract: Contractor responsible for first $2,000.
Alteration & Construction < $2,000	X		
Alteration & Construction > $2,000		X	
Other Government Directed Work < $2,000	X		
Other Government Directed Work > $2,000		X	
Interior Pest Control Services	X		

C.8.4 Definitions and Acronyms. See Attachment J-2.

C.8.4.1. Critical Buildings and Structures. Those facilities associated with the most important mission operations and services and therefore, require a higher performance standard for reliability and availability. See Attachment J-C8.2.

C.8.4.2. Integrated Pest Management (IPM). The use of appropriate technological and management techniques to obtain pest prevention and suppression in a cost effective environmentally sound manner.

C.8.5 Current Situation.

!**********
NOTE TO SPECIFICATION WRITER: Describe briefly in this subsection, using Section J attachments for more detailed listings, procedures and descriptions, the situation in which the performance now occurs. This includes the usual inventory and workload data. Also use this subsection to highlight any significant factors that affect performance. This may be in-house and contract interface during performance; types of service recipients and any special demands; pattern of service demands; other contracts that interface; etc. Add additional paragraphs as needed to describe these factors.
**********!

C.8.5.1 Facilities Inventory. The inventory of buildings, structures and systems covered by this contract is contained in Attachments J-C8.1 and J-C8.2. Drawings and other technical data regarding these facilities are available for review in the Technical Library. The condition and other characteristics can be visually evaluated during the pre-proposal visit and observation period. !ADD ANY OTHER PERTINENT DATA!

C.8.5.2 Workload Data. The historical workload data includes that related to operations, maintenance and repair of buildings, structures and systems. The data for trouble calls, service request and IDIQ work packages includes facilities and other functional services described in this subsection. This data relates to the services and methods used in the past to provide the outcomes included in this subsection. The Contractor is not required to perform the work in the same manner so long as the required outcomes are obtained and all statutory, regulatory or specifically identified requirements are achieved. The information included in the Attachments may be used, in conjunction with the offeror's concept of operations and experience as a service provider, to formulate the appropriate level of service and methods of performance.

C.8.6 Records, Reports and Deliverables. Attachment J-C8.3 lists those records and reports related to these requirements that are currently maintained and prepared. The Contractor is expected to propose in the SOW those records and reports considered necessary to perform the work and achieve the required results. The Contractor is expected to identify and develop the necessary rationale to assist !NSERT CENTER/INSTALLATION NAME! with obtaining waivers from reporting requirements by NASA and others where such waivers will reduce contract costs.

C.8.7 References. All work performed by the Contractor shall conform to the latest issue of Federal and local laws, OSHA regulations, industry standards, and other applicable regulations, directives, and instructions including, but not limited to, those in Attachment J-H1.

END OF SUBSECTION C.8

C.9 UTILITIES SERVICES.

!**********
NOTE TO SPECIFICATION WRITER: This subsection as written addresses the operation and maintenance of basic utility production and distribution systems and facilities. Centers/ Installations may wish to include here the production, distribution and maintenance of other gas and liquid fluid systems such as helium, oxygen, nitrogen, methane, silane, argon, petroleum, etc., as applicable, for which the contractor will be responsible.
**********!

C.9.1 Objective. Steam !INSERT HIGH TEMPERATURE HOT WATER (HTHW) IF APPROPRIATE!, electric power, compressed air, potable water, industrial water and waste water services are available in the quality and quantity required to fully support the mission of the !INSERT CENTER/INSTALLATION NAME! and all customers of !INSERT CENTER/INSTALLATION NAME!.

C.9.2 Requirements.

C.9.2.1 Scope. The Contractor shall operate, maintain, and repair the utilities and infrastructure listed in Attachment J-C9. Also maintain and repair all utility plants and associated above- and below ground distribution and collection systems to maximize availability, reliability, and longevity. The Contractor shall provide utilities engineering and technical services associated with delivering these commodities. Utilities systems are comprised of !ADD & DELETE AS NEEDED!:

- Central heating plant and distribution system
- High and low voltage distribution system
- Compressed air production and distribution system
- Emergency generation system
- Potable and industrial water and distribution system
- Waste water collection and treatment system
- Compressed helium production and distribution system

Fuel for plant operation shall be !SELECT – Government or Contractor! furnished!.

C.9.2.1.1 Operations. Establish operating criteria and standards and perform the starting, stopping, inspection, monitoring, adjusting, testing and data recording, as applicable, of the utilities systems and equipment and the related control systems to achieve the standards

C.9.2.1.2 Maintenance. Perform work required to preserve a system in the condition that it may be effectively utilized for its designated purpose. Both recurring and non- recurring maintenance work are included. Recurring maintenance is the systematic day-to-day, scheduled activities such as preventive maintenance intended to prevent malfunction or failure. Non-recurring maintenance is unscheduled actions taken to prevent malfunction or failure. An example of non-recurring maintenance is replacement of a system component that tests indicate will fail soon.

C.9.2.1.3 Repair. Perform work that is required to restore a system or component to a condition substantially equivalent to its originally intended and designed capacity, efficiency or capability. Repair is associated with taking remedial action after malfunction or failure.

C.9.2.1.4 Alteration. Perform work to change the configuration (not maintenance or repairs) but not increase the value of the system, e.g. moving a door or relocating a value for accessibility.

C.9.2.1.5 Construction**.** Perform work to erect, install, or assemble (1) a new replacement facility, or (2) an addition in area, capacity, or both to an existing system. These are activities that are not required to preserve or restore a system.

C.9.2.2 Specific Outcome Requirements. The Contractor's proposed statement of work (SOW) shall be designed to meet the following specific outcome requirements and standards:

!**********
NOTE TO SPECIFICATION WRITER: The standards shown below are examples. The user should evaluate present operations and set standards that have a basis on past performance as well as operational requirements. Setting standards higher than what has been achieved in the past, unless based on new requirements, will increase costs.
**********!

!NOTE - THE FOLLOWING ARE EXAMPLES!

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.9.2.2.A	Operate the electrical distribution and emergency generation systems within their rated capacities to continuously deliver stable electric power to all connected loads and assure !INSERT CENTER/ INSTALLATION NAME! is provided a steady, fault-free power supply.	Production deficiencies.	a. No mission delays due to electric power deficiencies b. No more than two unscheduled outages per year and none last longer than two hours. c. No emergency system failures.
C.9.2.2.B	Operate the central heating plant and associated distribution systems, facilities, and equipment to assure the availability of !INSERT STEAM OR HIGH TEMPERATURE HOT WATER (HTHW)! to the !INSERT CENTER/INSTALLATION NAME!.	Production deficiencies	No more than two unscheduled outages per year and none last longer than two hours.
C.9.2.2.C	Operate the central air compressor plant and associated distribution systems, facilities, and equipment to assure the availability of sufficient compressed air to the !INSERT CENTER/ INSTALLATION NAME!.	Production and distribution deficiencies	No more than two instances per year where the required pressure at the system access points fall below minimum acceptable demand pressures (psi).

C.9.2.2.D	Operate the wastewater collection systems, pumping stations, and treatment facilities in accordance with applicable health standards to provide continuous, cost effective, and efficient collection, conveyance and treatment of all wastewater generated at !INSERT CENTER/ INSTALLATION NAME!.	Production deficiencies	a. No more than two unscheduled outages per year and none last longer than two hours. b. No health or environmental violations.
C. 9.2.2.E	Operate the water system to produce sufficient potable water to meet demand up to a maximum of !INSERT NUMBER! gallons per !INSERT RANGE! and industrial water to meet demand up to a maximum of !INSERT NUMBER! gallons per !INSERT RANGE! with quality required by all federal, state and local agencies.	Production deficiencies	a. No Quality or Quantity deficiencies b. No health or environmental violations.
C.9.2.2.F	Maintain and repair all utility systems to maximize availability, reliability, and longevity needs of the !INSERT EITHER CENTER OR INSTALLATION!. and all customers.	Outages due to maintenance and repair related failure.	No more than one per year for each system
C.9.2.2.G	Read all electric !ADD OTHERS IF APPLICABLE! meters on a regular !INSERT FREQUENCY! Schedule. Bill customers for electric consumption in compliance with established schedule !SUGGEST IF BILLING IS DONE AT CENTER/INSTALLATION!	1. Accuracy 2. Timeliness.	Accuracy 99.9% Timeliness 100%

!**********
NOTE TO SPECIFICATION WRITER: When considered necessary, specific detailed work tasks may be specified. These are tasks that are viewed as so critical to mission success, safety or are of such high visibility that contractor discretion with the performance method used will not be permitted. It must be recognized that the Government reduces Contractor risk when the work specification becomes more specific while constraining the Contractor's opportunity to propose alternate methods that may lower cost and/or improve quality. The following are examples.
**********!

C.9.2.3 Specific Output Requirements. The following specific outputs are mandated for this work function. These requirements are in addition to other tasks and methodologies proposed by the Contractor in the SOW to meet the outcome objectives.

!NOTE - THE FOLLOWING ARE EXAMPLES!

C.9.2.3.1 Operation Procedures Plan. Prior to Contract start, the Contractor shall submit an Operation Procedures Plan that describes the Contractor’s approach and methodology for operation

and maintenance of all plants, equipment, and distribution and collection systems. The plan shall specifically address the following:

- Operating criteria and procedures
- Preventive Maintenance (PM) checklists and schedules where used
- Environmental and health compliance
- Energy and water conservation (see C.6.2.3.1)
- Emergency and backup procedures
- Certification, licensing and permits
- Performance measures for evaluating success of the operations and maintenance plan.

C.9.2.3.2 Predictive Testing and Inspection. The Contractor shall have Predictive Testing and Inspection (PT&I) capability that shall be used in the Contractor's maintenance program for the equipment and systems identified as critical in the J-C9 Attachments.

!**********
NOTE TO SPECIFICATION WRITER: The fixed price cost limit amounts shown in Paragraph C.8.3 are examples to portray the concept of shared responsibility between Government and Contractor for facility condition and reliability. The relative values ($500 and $2,000) are the approximate lower limits necessary for the concept to be effective. The Center should analyze historical data on this type of work, evaluate the results, and select appropriate amounts that will serve as the fixed price limit for the various situations and types of work. It is important that the limit be high enough to motivate contractor performance but not so high as to drive up the price or discourage offerors.
**********!

C.9.3 Contract Pricing. Contract pricing for work in this subsection (C9) is summarized in the following table. This pricing strategy is designed to give the Contractor an incentive to develop and perform a proactive and effective program of operations, PM and other maintenance techniques such as predictive testing. The Contractor remains responsible for the cost limits when the total cost of correction and repair exceeds the limit. The cost responsibility limit provides a reasonable risk sharing between the Government and the Contractor. As a further means of risk sharing, the cost limit for repair does not apply:

- For the first 6 months of the contract when lower limits are set to allow a reasonable time for the Contractor's program to be established.

- If the Contractor has identified to the Government the need for specific maintenance, prior to failure, that requires Government funding and that requirement has not been funded.

WORK TYPE	FIXED PRICE	INDEFINITE QUANTITY	REMARKS
Utilities Engineering and Technical Services	X		
Operation of Systems	X		
Recurring Maintenance	X		
Non-recurring Maintenance <$500	X		
Non-recurring Maintenance >$500		X	
Repair <$500	X		During first six months of the

			contract
Repair >$500		X	During first six months of the contract: Contractor responsible for first $500
Repair <$2,000	X		After first six months of the contract
Repair >$2,000		X	After first six months of the contract: Contractor responsible for first $2,000.
Alteration and Construction < $2,000	X		
Alteration and Construction > $2,000		X	

C.9.4 Definitions and Acronyms. See Attachment J-C2.

C.9.5 Current Situation.

!**********
NOTE TO SPECIFICATION WRITER: Describe briefly in this subsection and refer to J-C attachments for more detailed listings, procedures and descriptions, and the situation in which the performance now occurs. This includes the usual inventory and workload data. Also use this subsection to highlight the significant factors that affect the performance. This may be the condition, age, size and so forth of the physical plant; types of service recipients and any special demands; pattern of service demands; other contracts that interface; etc.
**********!

The Information contained and referenced in this subsection relates to the methods used by the Government in the past or currently to provide utilities services. The Contractor is not required to use these methods except where required by statute, regulation and/or specifically specified in this subsection.

C.9.5.1 Electrical System. The electrical system consists of !INSERT BRIEF DESCRIPTION AND/OR LISTING AS APPROPRIATE SIMILAR TO FOLLOWING!

- Overhead and underground transmission and distribution lines from delivery points to all main service entrance switches in buildings and structures including substations and accessories;
- Exterior lighting systems, including airfield, street, flood, perimeter and security lighting;
- Secondary drops to the building or structure weatherhead or first connection to the building system; and
- Standby power generating plants including transformers, circuit breakers, generators, and other associated components.

Attachment J-C9-1 provides detailed inventory data on the system.

C.9.5.2 Central Heating System. The central heating system consists of !INSERT BRIEF DESCRIPTION AND/OR LISTING AS APPROPRIATE SIMILAR TO FOLLOWING! a central

!INSERT NUMBER! MBTU./Hr. system that includes the boilers, plant, and related equipment including fuel storage and handling, water treatment equipment, associated pumps, components, controls, and the !INSERT STEAM OR HIGH TEMPERATURE HOT WATER (HTHW)! distribution systems including !INSERT STEAM OR HIGH TEMPERATURE HOT WATER (HTHW)! lines, condensate return pumps, and related equipment. Attachment J-C9-2 provides detailed inventory data on the system.

C.9.5.3 Compressed Air Production and Distribution. The Central Compressor Plant system consists of !INSERT BRIEF DESCRIPTION AND/OR LIST AS APPROPRIATE SIMILAR TO THE FOLLOWING! air compression and distribution systems up to !INSERT NUMBER! psig with above- and below-ground piping of various materials and sizes up to !INSERT NUMBER! inches. There are !INSERT NUMBER! compressors with the capability of providing !INSERT CAPACITY/CAPABILITY! per hour and the system includes all associated valves, regulators, high pressure switches, transmitters and pumps. The system requires periodic calibration and verification, nondestructive testing and hydrostatic testing. Attachment J-C9-3 provides detailed inventory data on the system.

C.9.5.4 Potable and Industrial Water System. The potable and industrial water system consists of pumping, treatment, storage, and distribution subsystems. These subsystems are comprised of !INSERT BRIEF DESCRIPTION AND/OR LISTING OF COMPONENTS AS APPROPRIATE SUCH AS treatment plants, pumps, reservoirs, meters, cleanouts, pressure regulators.! Attachment J-C9-4 provides detailed inventory data on the system.

C.9.5.5 Wastewater System. The wastewater system consists of collection, pumping and treatment subsystems. These subsystems are comprised of !INSERT BRIEF DESCRIPTION AND/OR LISTING OF COMPONENTS AS APPROPRIATE!. The wastewater characteristics subject to treatment are variable, but generally the following characteristics may be expected: !LIST CHARACTERISTICS!.

C.9.5.6 Workload Data. The historical workload data in Attachment J-C9-5 relates to the services and methods used in the past to provide the outcomes included in this subsection. The Contractor is not required to perform in the same manner so long as the outcomes are obtained and all statutory, regulatory or specifically identified requirements are achieved. The information included in the attachment may be used, in conjunction with the offeror's concept of operations and experience as a service provider, to formulate the appropriate level of service and methods of performance.

C.9.6 Records, Reports, and Deliverables. Attachment J-C9-6 lists those records and reports currently maintained and prepared. The Contractor is expected to propose those records and reports considered necessary to perform the utilities function and achieve the required results in the SOW. The Contractor is expected to develop the necessary rationale to assist !INSERT CENTER/INSTALLATION NAME! with obtaining waivers from reporting requirements by NASA and others where such waivers will reduce contract costs.

C.9.7 References. All work performed by the Contractor shall conform to the latest issue of Federal and local laws, OSHA regulations, industry standards, and other applicable regulations, directives and instructions including, but not limited to, those in Attachment J-H1.

END OF SUBSECTION C.9

C.10 ROADS, AIRFIELD PAVEMENTS, AND OTHER SURFACED AREAS.

!**********
NOTE TO SPECIFICATION WRITER: Keeping snow and ice cleared from various surfaced areas has been included in the Grounds subsection. The specification writer should revise this subsection and any of the other subsections to reflect the Center/Installation's requirements for keeping snow and ice cleared from various surfaced areas as appropriate.
**********!

C.10.1 Objectives.

C.10.1.1 Roads, airfield pavements !INSERT OTHER SPECIFIC AREAS IF REQUIRED!, traffic control devices and other surfaced areas are available, function as designed and intended, and are safe for all vehicular and aircraft traffic and fully support !INSERT CENTER/ INSTALLATION NAME! operations.

C.10.1.2 Maintenance and repair of roads, airfield pavements !INSERT OTHER SPECIFIC AREAS IF REQUIRED!, traffic control devices, and other surfaced areas shall achieve the lowest life cycle costs.

C.10.2 Requirements.

C.10.2.1 Scope. The Contractor shall maintain and repair roads, pavements, surfaced areas and associated features identified in Attachment J-C10-1 and traffic control devices identified in Attachment J-C10-3. Work required includes pavement maintenance and repair, road grading, pavement sweeping, storm drainage system inspection, maintenance and repair, and traffic services related to traffic signs and pavement markings. Component systems include:

- Bituminous, concrete, aggregate and earth surfaced roads, parking, and storage areas
- Aircraft runways, taxiways and parking aprons
- Road shoulders
- Storm drainage systems
- Traffic control devices including signals, signs and pavement markings
- !INSERT OTHER SPECIFIC AREAS IF REQUIRED!

C.10.2.1.1 Maintenance. Perform work required to preserve a facility in the condition that it may be effectively utilized for its designated purpose. Both recurring and non- recurring maintenance work are included. Recurring maintenance is the systematic day-to-day, scheduled activities such as preventive maintenance and inspection intended to prevent malfunction or failure. Non-recurring maintenance is unscheduled actions taken to prevent malfunction or failure. An example of non-recurring maintenance is crack filling or debris removal from drainage ditches after a heavy storm.

C.10.2.1.2 Repair. Perform work that is required to restore a facility, facility component or collateral equipment to a condition substantially equivalent to its originally intended and designed capacity, efficiency or capability. Repair is associated with taking remedial action after malfunction, damage or failure.

C.10.2.1.3 Alteration. Perform work to change the configuration (not maintenance or repairs) but not increase the value of the facility, e.g. relocating aircraft tie-downs or traffic signs.

C.10.2.1.4 Construction. Perform work to erect, install, or assemble (1) a new replacement facility, or (2) an addition in area to an existing facility. These are activities that are not required to preserve or restore a facility.

C.10.2.2 Specific Outcome Requirements. The Contractor's proposed statement of work (SOW) shall be designed to meet the following specific outcome requirements and standards.

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.10.2.2A	Roads, airfield pavements, !INSERT OTHER SPECIFIC AREAS IF REQUIRED! and other surfaced areas are available, fully functional, and meet the operational requirements of the !INSERT CENTER OR INSTALLATION!.	1. Complaints 2. Incidents of reduced or non availability or functionality 3. Cost, time or other measure of avail-ability and function-ality incidents	Valid complaints per month are less than baseline data Number of incidents do not exceed baseline No adverse affects on mission critical activities
C.10.2.2B	Roads, airfield pavements, !INSERT OTHER SPECIFIC AREAS IF REQUIRED! and other surfaced areas are safe and hazard free.	1. Accidents 2. Property damage incidents	No accidents related to condition of pavements and surfaced areas or action/ inaction of Contractor No incidents of property damage related to condition of pavements and surfaced areas or action/inaction of Contractor
C.10.2.2C	Maintenance and repair of roads, airfield pavements, !INSERT OTHER SPECIFIC AREAS IF REQUIRED! and other surfaced areas are affordable	Cost of major repairs	Declining cost trend for major repair .

!**********

NOTE TO SPECIFICATION WRITER: When considered necessary, specific detailed work tasks may be specified. These are tasks that are viewed as so critical to mission success, safety or are so highly visible that contractor discretion with the performance method used will not be permitted. It must be recognized that the government assumes greater risk as the work specification becomes more specific while constraining the Contractor's opportunity to propose alternate methods that

may result in lower cost and/or improved quality. The following are two examples of work requirements that may be specified in this manner.
**********!

C.10.2.3 Specific Output Requirements. The following specific output or work tasks are mandated for this work function. These requirements are in addition to the methodologies proposed by the Contractor in the SOW to meet outcome objectives.

!NOTE: THE FOLLOWING ARE EXAMPLES!

C.10.2.3.1 Airfield pavement sweeping shall be provided in accordance with the schedule in Attachment J-C1-10.2 and when ordered by the contracting Officer. There were an average of !INSERT NUMBER! unscheduled sweeping requirements each year during the past !INSERT NUMBER! years.

C.10.2.3.2 Potholes shall be repaired within !INSERT NUMBER! !INSERT DAYS OR HOURS! after being reported.

!**********
NOTE TO SPECIFICATION WRITER: The fixed price cost limit amounts shown in Paragraph C.10.3 are examples to portray the concept of shared responsibility between Government and Contractor for facility condition and reliability. The relative values ($500 and $2,000) are the approximate lower limits necessary for the concept to be effective. The Center should analyze historical data on this type of work, evaluate the results, and select appropriate amounts that will serve as the fixed price limit for the various situations and types of work. It is important that the limit be high enough to motivate contractor performance but not so high as to drive up the price or discourage offerors.
**********!

C.10.3 Contract Pricing. The following table summarizes the various work types and the pricing mechanism for each. This pricing strategy is designed to give the Contractor an incentive to develop and perform a proactive and effective program of operations, PM and other maintenance techniques such as predictive testing. The Contractor remains responsible for the cost limits when the total cost of correction and repair exceeds the limit. The cost responsibility limit provides a reasonable risk sharing between the Government and the Contractor. As a further means of risk sharing, the cost limit for repair does not apply:

- For the first 6 months of the contract when lower limits are set to allow a reasonable time for the Contractor's program to be established.
- If the Contractor has identified to the Government the need for specific maintenance, prior to failure, that requires Government funding and that requirement has not been funded.

WORK TYPE	FIXED	INDEFINITE QUANTITY	REMARKS
Recurring maintenance	X		
Non-recurring maintenance <$500	X		
Non-recurring maintenance >$500		X	
Repair <$500	X		During first six months of the contract
Repair >$500		X	During first six months of the contract: Contractor responsible for first $500
Repair <$2,000	X		After first six months of the contract
Repair >$2,000		X	After first six months of the contract: Contractor responsible for first $2,000.
Alteration and Construction < $2,000	X		
Alteration and Construction > $2,000		X	

C.10.4 Definitions and Acronyms. See Attachment J-2.

C.10.5 Current Situation.

!**********
NOTE TO SPECIFICATION WRITER: Describe briefly in this subsection and refer to J-C attachments for more detailed listings, procedures and descriptions, and the situation in which the performance now occurs. This includes the usual inventory and workload data. Also use this subsection to highlight the significant factors that affect performance. This may be the condition, age, size and so forth of the roads and surfaced area infrastructure; any special demands; pattern of service demands; other contracts that interface; etc.
**********!

The information contained and referenced in this subsection relates to the methods used by the Government in the past or currently to provide roads and surfaced area maintenance and repair. The Contractor is not required to use these methods except where required by statute, regulation and/or are specified in this subsection.

C.10.5.1 Facility Condition and Operating Environment. The condition of the pavements, surfaced areas, drainage system and traffic control devices can be visually evaluated during the pre-proposal visit and observation period.

!**********
!NOTE TO SPECIFICATION WRITER: To the extent possible, provide additional information that would be helpful to the offerors in understanding the work requirement. Data, such as the types and volumes of traffic using the roads and airfield, nature of operations using the storage areas, past funding patterns for repairs, number of heavy rainfalls, changes in operating patterns or intensity, could be important!
**********!

C.10.5.2 Workload Data. The historical workload data in Attachment J-C10.4 relates to the services and methods used in the past to provide the outcomes included in this subsection. The Contractor is not required to perform in the same manner so long as the outcomes are obtained and all statutory, regulatory or specifically identified requirements are achieved. The information included in the attachment may be used, in conjunction with the offeror's concept of operations and experience as a service provider, to formulate the appropriate level of service and methods of performance.

C.10.6 Records, Reports, and Deliverables. Attachment J-C10.5 lists those records and reports currently maintained and prepared. The Contractor is expected to propose in the SOW those records and reports considered necessary to perform the roads and surfaced area maintenance and repair function and achieve the required results.

C.10.7 References. All work performed by the Contractor shall conform to current Federal, state and local laws, OSHA regulations, industry standards, and other applicable regulations, directives and instructions including, but not limited to, those in Attachment J-H1.

END OF SUBSECTION C.10

C.11 GROUNDS MAINTENANCE.

!**********
NOTE TO SPECIFICATION WRITER: Control of exterior pests associated with vegetation and nuisance pests and animals is included in this Grounds Maintenance subsection. Refer to Subsection C.8, *Buildings and Structures operations, Maintenance and Repair*, for the control of interior pests.
****

C.11.1 Objective.

C.11.1.1 All grounds and associated vegetation enhance the image of the !INSERT CENTER OR INSTALLATION NAME! and provide a pleasing environment for !INSERT CENTER OR INSTALLATION NAME! workers and visitors.

C.11.1.2 !INSERT CENTER OR INSTALLATION NAME! grounds are managed and maintained in an efficient and cost effective manner.

C.11.1.3. Pests and animals in open and other exterior areas are controlled to provide an outdoor environment that is comfortable, healthy and safe for personnel and non-threatening for property.

C.11.2 Requirements.

C.11.2.1 Scope. The Contractor shall maintain grounds and associated vegetation as listed in Attachment J-C11.1. Work required includes grass cutting, edging, herbicide management, tree and shrub pruning, cultivation and mulching, fertilization, grounds litter and dead vegetation collection and disposal, irrigation, exterior pest control and keeping snow and ice cleared from various surfaced areas (See Attachment J-C11.2).

!**********
NOTE TO SPECIFICATION WRITER: Keeping snow and ice cleared from various surfaced areas has been included in this subsection. The specification writer should revise this subsection and any of the other subsections to reflect the Center/Installation's requirements for keeping snow and ice cleared from various surfaced areas as appropriate.
**********!

C.11.2.2 Specific Outcome Requirements. The Contractor's proposed statement of work (SOW) shall be designed to meet the following specific outcome requirements and standards:

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.11.2.2A	Grounds present a uniformly pleasing and functional appearance appropriate to the use and the type of vegetation and commensurate with the overall !INSERT CENTER OR	1. Appearance	Comparable to or exceeds the appearance of similar government and commercial facilities

	INSTALLATION! objective to contain support services cost	2. !INSERT CENTER OR INSTALLATION! personnel and visitor input	!INSERT CENTER OR INSTALLATION! personnel and visitors have 95% favorable observations; no more than !INSERT NUMBER! valid complaints per quarter.
C.11.2.2.B	Pests are controlled in exterior and open areas	1. Customer input 2. Incidents of infestation and sightings	Customers are satisfied with the pest management program underway b. Declining customer complaints and service calls
C.11.2.2C	Long-term health of vegetation is maintained or improved without significant replacement or alteration costs.	1. Incidents of vegetation disease and/or deterioration 2. Costs of vege-tation replacement or landscaping alterations	No incidents of preventable disease or deterioration No costs for vegetation replacement or alteration that are not justified as cost effective
C.11.2.2D	Maintain accessible and safe roads, parking areas, sidewalks, steps, and building entrances for required operations, safety and fire protection during periods of ice and snow.	1. Incidents of disruption to !INSERT CENTER/ INSTALLATION NAME! operations 2. Accidents during periods of snow and ice	No operational disruptions Accident rate during snow and ice periods does not exceed baseline; no accidents attributed to Contractor action or inaction regarding snow removal
C.11.2.2E	Maintain a level of pest and animal control that provides an outdoor environment that is comfortable, healthy and safe for personnel and non-threatening for property.	1. Reports of pest and animal presence 2. Regional survey results of condit-ions at similar complexes 3. Effectiveness of response to complaints	Outdoor environment is equal to or better than regional norm Outdoor environment is equal to or better than regional norm Responses to problems provide relief commensurate to threat

!**********
NOTE TO SPECIFICATION WRITER: When considered necessary, specific detailed work tasks may be specified. These are tasks that are viewed as so critical to mission success, safety or are of such high visibility that contractor discretion with the performance method used will not be permitted. It must be recognized that the government assumes greater risk when the work specification becomes more specific, while constraining the Contractor's opportunity to propose alternate methods that may lower cost and/or improve quality. A planting schedule for specific perennials at certain locations is an example of a work requirement that may be specified in this manner.
**********!

C.11.2.3 Specific Output Requirements. The following specific output or work tasks are mandated for this work function. These requirements are in addition to the methodologies proposed by the Contractor in the SOW to meet the outcome objectives.

C.11.2.3.1 Grounds Care Plan. Submit a grounds care plan that describes the technical approach including energy and water conservation (see C.6.2.3.1), frequencies, personnel, equipment, and materials that will be utilized in performing grounds care. The plan shall be prepared by an agronomist or other qualified person and submitted no later than !INSERT NUMBER! days after contract start.

C.11.2.3.2 Integrated Pest Management Plan. Prior to contract start, the Contractor shall submit, for government approval, an Integrated Pest Management Plan that addresses the use of appropriate technological and management techniques to obtain pest prevention and suppression in exterior and open areas in a cost effective, environmentally sound manner. See also Paragraph C.8.2.3.5 for interior pest control.

C.11.3 Contract Pricing. Contract pricing for work in this subsection(C.11) is:

WORK CATEGORY	FIXED PRICE	INDEFINITE QUANTITY
Maintenance of Existing Grounds Areas.	X	
Exterior Pest and Animal Control	X	
Government directed improvements and alterations to existing grounds areas, including new landscaping		X

C.11.4 Definitions and Acronyms. See Attachment J-2

C.11.5 Current Situation

!**********
NOTE TO SPECIFICATION WRITER: Describe briefly in this subsection and refer to J-C attachments for more detailed listings, procedures and descriptions, the situation in which the performance now occurs. This includes the usual inventory and workload data. Also use this subsection to highlight the significant factors that affect the performance. This may be the quantity

and description of grass, trees or other vegetation which are unusual to the area, requires more, less or different care than normal; most likely pest infestations based on past history; other contracts that interface; etc.
**********!

The information contained and referenced in this subsection relates to the methods used by the Government in the past or currently to provide grounds maintenance services. The Contractor is not required to use these methods except where required by statute, regulation and/or specifically specified in this subsection.

C.11.5.1 Grounds Care Inventory. The inventory of grounds and associated vegetation to receive care is contained in Attachment J-C11.1. The types of vegetation, terrain features and current condition of the grounds and vegetation can be visually evaluated during the pre-proposal visit and observation period. The Contractor is encouraged to propose in the SOW cost effective landscaping and other changes to the existing grounds inventory. !ADD ANY OTHER PERTINENT DATA!

C.11.5.2 Workload Data. The historical workload data in J-C11 Attachments relates to the services and methods used in the past to provide the outcomes included in this subsection. The Contractor is not required to perform in the same manner so long as the outcomes are obtained and all statutory, regulatory or specifically identified requirements are achieved. The information included in the Attachments may be used, in conjunction with the offeror's concept of operations and experience as a service provider, to formulate the appropriate level of service and methods of performance.

C.11.6 Records, Reports, and Deliverables. Attachment J-C1l.4 lists those records and reports currently maintained and prepared. The Contractor is expected to propose in the SOW those records and reports considered necessary to perform the grounds care function and achieve the required results.

C.11.7 References. All work performed by the Contractor shall conform to the latest issue of Federal and local laws, OSHA and EPA regulations, industry standards, and other applicable regulations, directives and instructions including, but not limited to, those in Attachment J-H1.

END OF SUBSECTION C.11

C.12 REFUSE COLLECTION AND DISPOSAL SERVICES

C.12.1 Objectives.

C.12.1.1 Refuse Collection and Disposal. Refuse collection and disposal meet mission performance and base operations needs, conform to all Federal, state and local laws and regulations and contribute to the !INSERT CENTER/INSTALLATION NAME! professional appearance and healthful environment.

!**********
NOTE TO SPECIFICATION WRITER: If a more extensive recycling program than specified in Subsection C.7, *Environmental Support Services*, is included in the contract, the following objective may be appropriate.
**********!

C.12.1.2 Recycling. Recycling of solid waste complies with the *Resource Conservation and Recovery Act* and other Federal, state and local laws and regulations and NASA policy.

C.12.2 Requirements**.**

C.12.2.1 Scope. The Contractor shall collect and dispose of solid waste from industrial, commercial, and community activities to support the mission and operations of !INSERT CENTER/INSTALLATION NAME! and ensure compliance with Federal, state and local laws and regulations and NASA policy. The Contractor shall also operate a recycling program to include !ADD OR DELETE FOR SPECIFIC SITE! paper, cardboard, glass, plastic and aluminum and shall remove animal carcasses form roads and occupied areas. See Subsection C.7 for hazardous and controlled waste collection and disposal, universal waste recycling, sanitary landfill operation, and other related requirements.

C.12.2.2 Specific Outcome Requirements. The Contractor's proposed statement of work (SOW) shall be designed to meet the following specific outcome requirements and standards:

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.12.2.2A	Solid waste collection and disposal operations ensure sanitary and healthful conditions and conform to all Federal and local laws, statutes, and regulations	Customer input	No more than !INSERT NUMBER! substantiated unsatisfactory incidents per month
C.12.2.2.B	Solid waste containers are contin-uously available to support mission and operational needs for solid waste removal.	Customer input	No more than !INSERT NUMBER! substantiated unsatisfactory incidents per month
C.12.2.2C	Recycling program complies with law, regulation and policy.	Number of non-conformances.	No more than !INSERT NUMBER! of non-conformances per month

!**********
NOTE TO SPECIFICATION WRITER: When considered necessary, specific detailed work tasks may be specified. These are tasks that are viewed as so critical to mission success, safety or are of such high visibility that contractor discretion with the performance method used will not be permitted. It must be recognized that the government assumes greater risk as the work specification becomes more specific. This is a judgement call that should be carefully considered because of the shift in risk. The following are two examples of work requirements that may be specified in this manner.
**********!

C.12.2.3 Specific Output Requirements. The following specific output or work tasks are mandated for this work function. These requirements are in addition to the methodologies proposed in the SOW by the Contractor to meet the outcome objectives.

!NOTE - THE FOLLOWING ARE EXAMPLES!

C.12.2.3.1 Collection Schedule. A plan for vehicle routes and collection schedules shall be submitted for approval within !INSERT NUMBER! days after award of the contract. This plan, once approved, shall be strictly followed and changes shall be approved by the Contracting Officer in advance of their taking place.

C.12.2.3.2 Collection Times. Operations shall be confined to daylight hours commencing not earlier than !INSERT TIME! and continuing not later than !INSERT TIME! for all collections in the !INSERT NAME/DESCRIPTION OF AREA! unless otherwise approved in advance by the Contracting Officer.

C.12.3 Contract Pricing. Contract pricing for work in this subsection is:

!**********
NOTE TO SPECIFICATION WRITER If the number of some unscheduled services is consistent from year to year, it is recommended that this information be provided as historical data in an Attachment in Section J and that these services be included in the firm fixed-price portion of the contract. Contractor bids would then be based on the historical data provided.
**********!

WORK CATEGORY	FIXED PRICE	INDEFINITE QUANTITY
Scheduled Refuse collection and disposal services.	X	
Unscheduled services for special events or other requirements.		X

C.12.4 Definitions and Acronyms. See Attachment J-2

C.12.5 Current Situation

!**********
NOTE TO SPECIFICATION WRITER: Describe briefly in this subsection and refer to J-C attachments for more detailed listings, procedures and descriptions, the situation in which the performance now occurs. This includes the usual inventory and workload data. Also use this subsection to highlight the significant factors that affect performance. This may be patterns of waste generation; special requirements for temporary storage of collected waste; limitations on collection method and container size or type at certain locations; any special demands; other contracts that interface; etc.
**********!

The information contained and referenced in this subsection relates to the methods used by the Government in the past or currently to provide refuse collection and disposal services. The Contractor is not required to use these methods except where required by statute, regulation and/or specifically by this subsection.

C.12.5.1 Operating Environment. The types and locations of waste generators, current collection methods and locations, access routes, transfer stations, recycling facilities, and other characteristics of the refuse collection and disposal operation can be visually inspected during the pre-proposal visit and observation period.

!**********
!NOTE TO SPECIFICATION WRITER: To the extent possible, provide additional information that would be helpful to offerors in understanding the work requirement. Data such as the types and quantities of waste, seasonal or other variations, changes in operating patterns or intensity, and wastes not suitable for the landfill, could be important!
**********!

C.12.5.2 Workload Data. The historical workload data in this paragraph and J-C12 Attachments relates to the services and methods used in the past to provide the outcomes included in this subsection. The Contractor is not required to perform in the same manner so long as the outcomes are obtained and all statutory, regulatory or specifically identified requirements are achieved. The information included in the Attachments may be used, in conjunction with the offeror's concept of operations and experience as a service provider, to formulate the appropriate level of service and methods of performance.

C.12.6 Records, Reports, and Deliverables. Attachment J-C12.4 lists those records and reports currently maintained and prepared. The Contractor is expected to propose in the SOW those records and reports considered necessary to perform the refuse collection and disposal function and achieve the required results.

C.12.7 References. All work performed by the Contractor shall conform to the latest issue of Federal and local laws, OSHA regulations, industry standards, and other applicable regulations, directives and instructions including, but not limited to, those in Attachment J-H1.

END OF SUBSECTION C.12

C.13 CUSTODIAL SERVICES

C.13.1 Objective. Buildings are clean, attractive and serviceable to meet the needs of the operations being performed and the occupants.

C.13.2 Requirements.

C.13.2.1 Scope. The Contractor shall perform custodial cleaning and service for the buildings listed in J-C13.1. Work requirements include:

- Interior space cleaning consisting of collecting waste; dusting and cleaning to a normal height; floor sweeping and vacuuming
- Exterior cleaning of entrances, landings, stairs, adjacent walkways, patios, loading docks and similar areas
- Floor surface care consisting of cleaning and protecting
- Restroom cleaning and servicing
- Emergency cleaning requirements, regardless of cause, that present a threat to personnel, property or !INSERT CENTER/INSTALLATION NAME! operations.

!**********
NOTE TO SPECIFICATION WRITER: The intent of the following scope requirement is to identify IDIQ services where the exact scopes and frequencies are at the discretion of the Center/Installation. Shift items between work descriptions that will be fixed-price and those that are discretionary, as needed for budgetary or other reasons. Add or delete items to this total listing as appropriate for and specific to the Center/Installation.
**********!

- Discretionary services consisting of light fixtures cleaning, dusting and cleaning of high surfaces, interior and exterior glass cleaning, venetian blinds cleaning, and support for special events.

C.13.2.2 Specific Outcome Objectives. The Contractor's proposed statement of work (SOW) shall be designed to meet the following specific outcome requirements and standards:

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.13.2.2A	Building spaces are clean and sanitary, and provide a pleasing environment for !INSERT CENTER/INSTALLATION NAME! workers and visitors.	1. Occupant input 2. Comparability survey of similar professional offices and research facilities.	Occupant survey satisfaction ratings equal or exceed base-line data; no more than !INSERT NUMBER! of substantiated complaints per month !SUGGEST BASING ON HISTORICAL DATA!

C.13.2.2B	Custodial services meet needs of !INSERT CENTER/INSTALLATION NAME! operations.	Incidents of operational delay and interference	No validated incidents attributable to Contractor
C.13.2.2C	Space Cleaning: -Floors and carpets are free of dirt and debris -Waste containers are useable and odor free. -All Surfaces are free of dust -Exterior spaces are free of dirt & debris	Number of complaints	Number of valid complaints per month does not exceed baseline data.
C.13.2.2D	Floor Cleaning: -All surface areas are free of dirt and debris. -Non-carpeted floors have uniform gloss finish. -Entrances are protected by walk off mats	Number of complaints	Number of valid complaints per month does not exceed baseline data.
C.13.2.2E	Restroom Servicing: -Supplies are available -Floors are free of dirt and debris -Waste containers are usable and odor free. -All surfaces and fixtures are disinfected and free of stains and odors	Number of complaints	Number of valid complaints per month does not exceed baseline data.

!**********!

NOTE TO SPECIFICATION WRITER: When considered necessary, specific detailed work tasks may be specified. These are tasks that are viewed as so critical to mission success, safety or are of such high visibility that contractor discretion with the performance method used will not be permitted. It must be recognized that the Government assumes greater risk as the work specification becomes more specific. This is a judgement call that should be carefully considered because of the shift in risk. A specific frequency for interior cleaning of a certain building or space, or a specific cleaning method to be used for a clean room are examples of work requirements that may be specified in this manner.

**********!

C.13.2.3 Specific Output Requirements. The following specific output or work tasks are mandated for this work function. These requirements are in addition to the methodologies proposed by the Contractor in the SOW to meet the outcome objectives.

!NOTE - THE FOLLOWING ARE EXAMPLES!

C.13.2.3.1 Trouble Calls. The Contractor shall respond to emergency trouble call requests for cleaning within !INSERT TIME! during regular working hours. Historically, there has been an average of !INSERT NUMBER! such calls per !INSERT FREQUENCY!. These calls include, but are not limited to, such items as:

- Cleaning the aftermath of overflowed restroom fixtures
- Cleaning up spills
- Cleaning muddied or wet entrances
- Cleaning up broken glass.

C.13.3 Contract Pricing. Contract pricing for work in this subsection is:

WORK CATEGORY	FIXED PRICE	INDEFINITE QUANTITY
All custodial services except those identified as discretionary	X	
Discretionary services		X

C.13.4 Definitions and Acronyms. See Attachment J-2

C.13.5 Current Situation

!**********
NOTE TO SPECIFICATION WRITER: Describe briefly in this subsection and refer to J-C attachments for more detailed listings, procedures and descriptions, the situation in which the performance now occurs. This includes the usual inventory and workload data. Also use this subsection to highlight the significant factors that affect performance. This may be the number of shift operations; special cleaning requirements, such as in "clean rooms" and in computer spaces where floor cleaning may require the removal of sub-floor panels and special cleaning methods; other contracts that interface; etc.
**********!

The information contained and referenced in this subsection relates to the methods used by the Government in the past or currently to provide custodial services. The Contractor is not required to use these methods except where required by statute, regulation and/or specifically by this subsection.

C.13.5.1 Inventory. The inventory of facilities now receiving custodial services is contained in Attachment J-C13.1. The nature of the facilities, types of finishes, special features and current condition can be visually evaluated during the pre-proposal visit and observation period. !ADD ANY OTHER PERTINENT DATA!

C.13.5.2 Workload Data. The historical workload data in J-C13 Attachments relates to the services and methods used in the past to provide the outcomes included in this subsection. The Contractor is not required to perform in the same manner so long as the outcomes are obtained and all statutory, regulatory or specifically identified requirements are achieved. The information included in the Attachments may be used, in conjunction with the offeror's concept of operations and experience as a service provider, to formulate the appropriate level of service and methods of performance.

C.13.6 Records. Reports, and Deliverables. Attachment J-C13 lists those records and reports currently maintained and prepared. The Contractor is expected to propose in the SOW those

records and reports considered necessary to perform the custodial services and achieve the required results.

C.13.7 References. All work performed by the Contractor shall conform to the latest issue of Federal and local laws, OSHA and EPA regulations, industry standards, and other applicable regulations, directives and instructions including, but not limited to, those in Attachment J-H1.

END OF SUBSECTION C.13

C.14 SECURITY SERVICES

C.14.1 Objectives.

C.14.1.1 Program Security. The mission programs of !INSERT CENTER/INSTALLATION NAME! are secure from unauthorized access and intrusion at all times and are fully supported during emergency situations.

C.14.1.2 Installation Security. !INSERT CENTER OR INSTALLATION NAME! support operations and associated personnel, property, and data and information receive affordable physical and information security.

C.14.2 Requirements.

C.14.2.1 Scope. The Contractor shall provide a comprehensive security program for ! INSERT CENTER/INSTALLATION NAME! in accordance with Federal, state and local laws and regulations and NASA policies at the sites and facilities described in J-C14 Attachments. The program shall include guard service, perimeter and roving patrol security, access control, visitor control, badging, traffic control, and criminal investigation.

C.14.2.1.1 Guard Services. Guard services shall include:

- Deterrence and reporting of unauthorized entry into designated security areas
- Deterrence and reporting of injury to or crimes against personnel
- Deterrence and reporting of damage, theft, threats or other improper actions to property
- Courier service, and
- Response to, management and control of, and mitigation support for emergency situations

C.14.2.1.2 Perimeter and Roving Security. Perimeter and roving security shall include:

- Checks to detect unauthorized entry at the !INSERT CENTER/INSTALLATION NAME! perimeter
- Checks of the !INSERT CENTER/INSTALLATION NAME! interior and all buildings and equipment to detect and report or correct unsecured, unsafe and undesirable conditions, and
- Raising and lowering the United States and other authorized flags at designated locations.

C.14.2.1.3 Access Control. Access control shall include:

- Limiting entry at gates of !INSERT CENTER/INSTALLATION NAME! to authorized personnel and vehicles
- Preventing entry of prohibited private property into !INSERT CENTER/INSTALLATION NAME! and providing temporary security for such items
- Key and combination control for gates, buildings, offices, equipment and similar facilities
- Opening and closing gates and buildings as scheduled or required
- Monitoring and responding to intrusion alarms, and
- Operating the “lost and found” service.

C.14.2.1.4 Visitor Control. Visitor control shall include:

- Scheduled and unscheduled escort for personnel without security clearance and movement of classified, valuable or hazardous cargo, and
- Security and control for special events (such as the Annual Open House).

C.14.2.1.5 Badging. Badging shall include:

- Management of the badging system and
- Issuance of daily, temporary and permanent personnel and vehicle passes.

C.14.2.1.6 Traffic Control. Traffic control shall include:

- Direction of traffic as scheduled and required
- Enforcement of traffic and parking regulations, and
- Response support to and investigation of traffic accidents.

C.14.2.1.7 Criminal Investigation. Criminal investigation shall include:

- Collecting, evaluating and managing criminal and security information involving !INSERT CENTER/INSTALLATION NAME!
- Assisting and coordinating with the OIG, Chief Counsel's Office and other investigative agencies
- Custodial responsibility for evidence
- Using and maintaining surveillance equipment, and
- Providing documentation and testimony as required.

C.14.2.2 Specific Outcome Requirements. The Contractor's proposed statement of work (SOW) shall be designed to meet the following specific outcome requirements and standards:

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.14.2.2A	Secure and classified resources are protected as required by law, regulation and mission needs.	Number of incidents of unauthorized access or security compromise	No incidents
C.14.2.2B	Rapid and effective response to emergency situations.	1. Timeliness of response 2. Personnel injury, security compromise, time delay and dollar cost	IAW operations plan and reasonable in consideration of location, time of day, contract funding. Response actions IAW operations plan and damage or loss mitigated to extend practicable
C.14.2.2C	Access and visitor control provides positive and professional image to public, employees and contractors	Input from public, employees and contractors	No more than !INSERT NUMBER – SUGGEST CONSIDER AFFECTED POPULATION! substantiated complaints and unsatisfactory reports per month

C.14.2.2D	Accurate, efficient and courteous badging	1. Number of incidents of inaccurate badges and badge control lapses	No more than !INSERT NUMBER – SUGGEST CONSIDER NUMBER OF BADGES IN USE AND HISTORICAL DATA ON PROBLEMS! substantiated incidents per month
		2. Input from service users	No more than !INSERT NUMBER – SUGGEST CONSIDER POPULATION RECEIVING BADGING SERVICE! substantiated complaints and unsatisfactory reports per month

!**********
NOTE TO SPECIFICATION WRITER: When considered necessary, specific detailed work tasks or specific task-level performance standards may be specified. These are tasks that are viewed as so critical to mission success, safety or are of such high visibility that Contractor discretion with the performance method used will not be permitted. It must be recognized that the government reduces the Contractor's flexibility and assumes greater risk, as the work specification becomes more specific. A specific work method, response time or frequency are examples of the type of requirements that may be specified in this paragraph.
**********!

C.14.2.3 Specific Output Requirements. Because of the criticality of certain functions and other mission support factors, the following specific output or work tasks are mandated for this work function. These requirements are in addition to the methodologies proposed by the Contractor to meet outcome objectives above.

C.14.2.3.1 Detention. The authority of Contractor security personnel to detain and/or make arrests shall be that of !INSERT "PRIVATE CITIZENS" OR APPROPORIATE JURISDICTION APPOINMENT! as defined by the laws of the State of !INSERT NAME OF STATE OR OTHER JURISDICTION!.

C.14.2.3.2 Operation Procedures Plan. The Contractor shall develop an Operation Procedures Plan using the following guidelines: (1) existing !INSERT CENTER/ INSTALLATION NAME! Security Police Standard Operating Procedures, (2) !INSERT LOCAL JURISDICTION POLICE PROCEDURES AND MEMORANDA OF UNDERSTANDING!, (3) FEDERAL GUIDELINES, ETC.! The Plan shall address:

- Special instructions and Security Police Standard Operating Procedures to be used
- Radio procedures, call signs and various points of contact
- Schedules for recurring work, such as roving patrols and the posting of guards
- Safety and accident procedures

C.14.2.3.3 Badging System. Badging services shall be managed and provided in accordance with NPD 1620.2, *NASA Badging System* unless Contractor proposed changes are approved by the Government.

C.14.3 Contract Pricing. Contract pricing for work in this subsection is:

WORK CATEGORY	FIXED	INDEFINITE QUANTITY
Guard services, perimeter and roving security, access control, visitor control, badging, traffic control and criminal investigation except as described elsewhere in this table	X	
Recall of personnel for emergency situations beyond the capability of on-duty staff (recall requires COTR authorization)		X
Unscheduled courier and escort services beyond the capability of on-duty staff (requires COTR authorization)		X
Security and control for special events other than !INSERT ANNUAL OPEN HOUSE AND OTHER RECURRING EVENTS THAT CAN BE QUANTIFIED BY HISTORICAL AND OTHER DATA!		X

C.14.4 Definitions and Acronyms. See Attachment J-2

C.14.5 Current Situation

!**********
NOTE TO SPECIFICATION WRITER: Briefly describe in this subsection the situation in which the performance now occurs and provide J-C attachments for more detailed listings, procedures and descriptions. This includes the usual inventory and workload data. Also use this subsection to highlight the significant factors that affect the performance. This may be unusual conditions and features of gates or perimeters; the pattern of service demands; traffic volumes and patterns; the nature of contractors operating onsite; etc.
**********!

The information contained and referenced in this subsection relates to the methods used by the Government in the past or currently to provide Security services. The Contractor is not required to use these methods except where required by statute, regulation and/or are specified in this subsection.

C.14.5.1 Conditions. The conditions in which the security program must be carried out can be evaluated visually during the pre-proposal visit and observation period.

!**********
!NOTE TO SPECIFICATION WRITER: To the extent possible provide or reference additional information that would be helpful to offerors in understanding the work requirement. Data such as physical characteristics, operational limitations, and cultural-economic setting may be important.
**********!

C.14.5.2 Workload Data. The historical workload data in Attachment J-C14.3 relates to the services and methods used in the past to provide the outcomes included in this subsection. The Contractor is not required to perform in the same manner so long as the outcomes are obtained and all statutory, regulatory or specifically identified requirements are achieved. The information included in the attachment may be used, in conjunction with the offeror's concept of operations and experience as a service provider, to formulate the appropriate level of service and methods of performance.

C.14.6 Records, Reports, and Deliverables. Attachment J-C14.2 lists those records and reports currently maintained and prepared and identifies those that must continue to be produced by the Contractor. The Contractor is expected to propose in the SOW those records and reports, in addition to those that are mandatory, considered necessary to perform the security function and to achieve the required results.

C.14.7 References. All work performed by the Contractor shall conform to current Federal, state and local laws, OSHA regulations, industry standards, and other applicable regulations, directives and instructions including, but not limited to, those in Attachment J-H1.

!**********
NOTE TO SPECIFICATION WRITER: The following paragraph is suggested if it is considered necessary to specify minimum qualifications for any personnel. Generally, with an outcome-based solicitation, the Contractor would be free to use personnel as desired and would be expected to comply with all legal and regulatory requirements without it being specifically stated.
**********!

C.14.8 Personnel Qualifications. The Contractor shall provide personnel that have the suitability and qualifications to perform the security services required. Personnel shall have the education, training, licenses, and qualifications required by Federal, state and local agencies. !INSERT IF APPLICABLE – "Specific requirements for certain personnel are in Attachments J-C14.4 and J-C.14.5"!

END OF SUBSECTION C.14

C.15 SUPPLY AND TRANSPORTATION SERVICES

C.15.1 Objectives.

C.15.1.1 Supply Services. Supplies, materials and support services meet the needs of customers and fully support the mission of !INSERT CENTER/INSTALLATION NAME!.

C.15.1.2 Transportation Services. Transportation of personnel and material meet mission performance and base operations needs.

C.15.2 Requirements

C.15.2.1 Scope. The Contractor shall provide supply and transportation services to support the mission and operations of !INSERT CENTER/INSTALLATION NAME! and in compliance with all Federal, state and local laws and NASA policies and regulations.

C.15.2.1.1 Supply Operations. The Contractor shall provide management and operation of general supply and warehousing to include acquisition, accountability, storage and warehousing, and receiving and issuing for store stock, program stock, stand-by stock and Just-in-Time commodities. Special tasks include:

- Maintenance of the Stores Stock Cataloging system
- Freight shipping service for domestic and international shipments
- Property management including training custodians and excess property management
- Custodial storage services
- Management and operation of the POL storage facility and dispensing stations and delivery of fuels to stationary and mobile equipment
- Management of the gas cylinders/dewars program; and
- Bottled water, laundry and dry ice services

!ADD OR DELETE ANY TASKS THAT MERIT SPECIFIC MENTION AND MAY NOT BE RECOGNIZED AS PART OF THE GENERAL SUPPLY AND WAREHOUSING FUNCTION!

!**********

NOTE TO SPECIFICATION WRITER: The scope of supply services included in the contract will likely vary among Centers/Installations. The Contractor is responsible for purchasing within the scope described above. By including purchasing performed in accordance with statutory and regulatory requirements, the Contractor is fully responsible for the availability of material when needed. The Center/Installation must be “comfortable” with giving the Contractor full responsibility for the supply function. If not, purchasing could be retained as a government function and the contractor responsibility limited to the management of all other support functions including inventory and replenishment management.

The scope of transportation service will likely vary among Centers/Installations. The extent to which vehicles are government-owned by the Center/Installation or GSA leased, contractor furnished, or a combination of these will have the most affect on the contract scope. For example, when vehicles and equipment are contractor furnished such tasks as maintenance, repair, inventory

control and government fuels are not contract requirements for those vehicles. This section must be crafted carefully to best serve each user. As a broad general rule, it is more economical for the government to furnish only special purpose vehicles and equipment that are already in the fleet. If commercial-type vehicles are government owned, it is generally better to furnish them in "'as-is' condition and not to be replaced" and let the Contractor decide whether to accept them.
**********!

C.15.2.1.2 Transportation. The Contractor shall provide management and operation of the !INSERT CENTER/INSTALLATION NAME! transportation fleet in response to customer requirements. Special tasks include:

!**********
NOTE TO SPECIFICATION WRITER: Add to or delete from the following as appropriate.
**********!

- Management of the government-owned fleet to include inventory control, dispatching, GSA vehicle pickup and delivery, and dispensing government furnished fuel.
- Maintenance and repair of the government-owned fleet to include preventive maintenance, repairs, safety and environmental inspections, calibrations and load tests, road calls and tow truck service.
- Scheduled and non-scheduled bus services (See Attachment J-C15.3).
- Delivery and hauling service to include mail within !INSERT CENTER/INSTALLATION NAME!, furniture assembling and moving, and on- and off-site hauling services.

C.15.2.2 Specific Outcome Requirements. The Contractor's proposed statement of work (SOW) shall be designed to meet the following specific outcome requirements and standards:

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.15.2.2A	Supplies and materials meet negotiated need date	Issue date	!INSERT PERCENTAGE – SUGGEST 90%! meet need date with none more than !INSERT NUMBER – SUGGEST 3! work days late
C.15.2.2B	Supply support services meet the needs of customers	1. Schedule 2. Customer input	!INSERT PERCENTAGE - SUGGEST 95%! compliance with the schedule b. No more than ! INSERT NUMBER-SUGGEST 0.1% OF ESTIMATED TRANSACT-IONS! valid customer comp-laints per month
C.15.2.2C	Self-service vehicles and equipment are available as scheduled and reliable to support the operational needs of users	1. Schedule	a. !INSERT PERCENTAGE – SUGGEST 98%! schedule compliance

		2. Customer input	No more than !INSERT NUMBER-SUGGEST 0.1% OF ESTIMATED TRANSACT-IONS! valid customer comp-laints per month
C.15.2.2D	Bus services meet customer needs	1. Schedule	Scheduled service no later than !INSERT NUMBER - SUGGEST 5! minutes behind schedule; unscheduled !INSERT PERCENTAGE – SUGGEST 90%! on time and none more than !INSERT NUMBER! hour(s) late
		2. Customer input	No more than !INSERT NUMBER-SUGGEST A SMALL PERCENTAGE OF ESTIMATED PASSENGERS! valid customer complaints per month
C.15.2.2E	Delivery and hauling services meet customer needs	1. Schedule	!INSERT PERCENTAGE – SUGGEST 100%! compliance with mail schedule !INSERT PERCENTAGE – SUGGEST 95%! compliance with all other delivery schedules
		2. Customer input	No more than !INSERT NUMBER-SUGGEST 0.1% OF ESTIMATED TRANSACT-IONS! valid customer complaints per month

!**********
NOTE TO SPECIFICATION WRITER: When considered necessary, detailed work tasks may be specified. These are tasks that are viewed as so critical to mission success, safety or are of such high visibility that contractor discretion with the performance method used will not be permitted. It must be recognized that the government reduces contractor risk when the work specification becomes more specific, while constraining the Contractor's opportunity to propose alternate methods that may lower cost and/or improved quality.
**********!

C.15.2.3 Specific Output Requirements. Because of the criticality of certain functions and other mission support factors, the following specific output or work tasks are mandated for this work function. These requirements are in addition to the methodologies proposed by the Contractor to meet outcome objectives above.

C.15.2.3.1 Operation Procedures Plan. A Supply and Transportation Operations Plan shall document the approach to be used in achieving the supply and transportation requirements at !INSERT CENTER/INSTALLATION NAME!. The Plan shall describe the methods, procedures, schedules and contingency measures to be employed and identify the performance criteria the Contractor will use to measure performance. The plan shall include energy and water conservation (see C.6.2.3.1) measures pertaining to supply and transportation. This plan shall be submitted not later than ! INSERT NUMBER – SUGGEST 45! days after contract award for government approval.

C.15.2.3.2 NASA Data Systems. The NASA Supply Management System (NSMS), the NASA Equipment Management System (NEMS), and the NASA Property Disposal Management System (NPDMS) shall be used and maintained.

C.15.2.3.3 Equipment Inventory. A 100% triennial physical inventory of controlled equipment shall be conducted in accordance with NPD 4200.1 (series).

C.15.3 Contract Pricing. Contract pricing for work in this subsection (C.15) is:

WORK CATEGORY	FIXED	COST REIMBURSABLE	INDEFINITE QUANTITY
General supply and warehousing services	X		
Acquisition (cost of supplies, materials and equipment only)		X	
Management and maintenance of Government-owned fleet	X		
Scheduled bus, delivery and hauling services	X		
Non-scheduled bus, delivery and hauling services			X

C.15.4 Definitions and Acronyms. See Attachment J-2.

C.15.5 Current Situation.

!**********
NOTE TO SPECIFICATION WRITER: Describe briefly in this subsection the situation in which the performance now occurs and refer to J-C attachments for more detailed listings, procedures and descriptions. This includes the usual inventory and workload data. Also use this subsection to highlight the significant factors that affect performance. This may be the condition, age, size and so forth of the storage facilities and equipment; sources for procurement; any special demands; pattern of service demands; transportation fleet age and condition; fuel sources; other contracts that interface; etc.
**********!

The information contained and referenced in this subsection relates to the methods used by the Government in the past or currently to provide supply and transportation services. The Contractor is not required to use these methods except where required by statute, regulation and/or specifically specified in this subsection.

C.15.5.1 Facility and Equipment Condition. The condition of the facilities and equipment can be evaluated visually during the pre-proposal visit and observation period.

!**********
NOTE TO SPECIFICATION WRITER: To the extent possible provide additional information that would be helpful to offerors in understanding the work requirement. Data such as the history of repairs and renovations and future plans may be important.
**********!

C.15.5.2 Workload Data. The historical workload data in Attachment J-C15.1 relates to the services and methods used in the past to provide the outcomes included in this subsection. The Contractor is not required to perform in the same manner so long as the outcomes are obtained and all statutory, regulatory or specifically identified requirements are achieved. The information included in the attachment may be used, in conjunction with the offeror's concept of operations and experience as a service provider, to formulate the appropriate level of service and methods of performance.

C.15.6 Records, Reports, and Deliverables. Attachment J-C15.2 lists those records and reports currently maintained and prepared and identifies those that must continue to be produced by the Contractor. The Contractor is expected to propose those records and reports, in addition to those that are mandatory, considered necessary to perform the supply and transportation function and achieve the required results in the SOW. The Contractor is also expected to identify and develop the necessary rationale to assist !INSERT CENTER/INSTALLATION NAME! with obtaining waivers from reporting requirements by NASA and others where such waivers will reduce contract costs.

C.15.7 References. All work performed by the Contractor shall conform to current Federal, state and local laws, OSHA and EPA regulations, industry standards, and other applicable regulations, directives and instructions including, but not limited to, those in Attachment J-H1.

END OF SUBSECTION C.15

END OF SECTION C

SECTION J: LIST OF ATTACHMENTS

!**********
NOTE TO SPECIFICATION WRITER: The following identify Attachments for data and information that is needed for offerors to understand and evaluate contract requirements and the circumstances in which services will be delivered. In some cases examples of formats for data presentation are provided. No format is more correct than another is, and the user should revise an example or develop a different format that is a better fit for the data and background information available. Once a comfortable format is selected, it should be used consistently throughout the document as much as possible.

The numbering system used in Section J is designed so that the number of the Attachment refers back to the Section it supports (i.e., J-C for Section C; J-E for Section E, etc.) and, within that section, the first tier paragraph in which it is first referenced (i.e., J-C3 for paragraph C.3 - General Requirements; J-C5 for paragraph 5 – Engineering Services; etc.). Each paragraph may have more than one attachment that will be numbered (1, 2, 3, etc.) (J-C3-1, for example, is the Financial Reporting Requirements and J-C7-1 provides Data on Hazardous Material Control Board meetings). The user should add, modify or delete attachments as required or use a different numbering system if it better fits the situation.
**********!

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ATTACHMENT J-2

TECHNICAL DEFINITIONS AND ACRONYMS

!**********
NOTE TO SPECIFICATION WRITER: The definitions below may not necessarily match the definitions in the latest issue of the *NASA Facilities Maintenance Management Handbook* (NPG 8831.2 (series)). In the event of a conflict, the definition as written in NPG 8831.2 will take precedence and should be used, unless otherwise authorized by NASA Headquarters, Code JX.
**********!

As used throughout this contract, the following terms shall have the meaning set forth below. Additional definitions are in the Section C subsections and in the "DEFINITIONS" clause in Sec. I.

1. Where "as shown," "as indicated," "as detailed," or words of similar import are used, it shall be understood that reference is made to this specification and the drawings accompanying this specification unless stated otherwise.

2. Where "as directed," "as required," "as permitted," "approval," "acceptance," or words of similar import are used, it shall be understood that direction, requirement, permission, approval, or acceptance of the Contracting Officer is intended unless stated otherwise.

3. Alteration. Work that changes the configuration of a facility (not Maintenance or repairs) but that does not increase the value of the facility: for example, moving a door or electrical outlet.

4. Building. The classification "Building" includes the basic structure, capital improvements and fixed equipment that are normally required for the functional use of the building and becomes permanently attached to and made a part of the building and that cannot be removed without cutting into the walls, ceilings, or floors, such as plumbing, heating, and lighting equipment; elevators; central air-conditioning systems; and built-in safes and vaults.

5. Clean. "Clean" shall be defined as free of dirt, dust, spots, streaks, stains, smudges, litter, debris, and other residue.

6. Collateral Equipment. Encompasses building-type equipment, built-in equipment, and large, substantially affixed equipment/property and is normally acquired and installed as part of a facility project as described below:

Building-Type Equipment. A term used in connection with facility projects to describe equipment which is normally required to make a facility useful and operable. It is built in or affixed to the facility in such a manner that removal would impair the usefulness, safety, or environment of the facility. Such equipment includes elevators; heating, ventilating and air-conditioning systems; transformers; compressors; and other like items generally accepted as being an inherent part of a building or structure and essential to its utility. Such equipment also includes general building systems and subsystems such as electrical, plumbing, pneumatic, fire protection and control and monitoring systems.

Built-in or Large, Substantially Affixed Equipment. A term used in connection with facility projects of any type other than building-type equipment that is to be built in, affixed to, or installed in real property in such manner that the installation cost, including special foundations or unique utilities service, or the facility restoration work required after its removal, is substantial.

7. Computerized Maintenance Management System (CMMS). A CMMS is a set of computer software modules and equipment databases containing facility data with the capability to process the data for facilities maintenance management functions. These maintenance-related functions typically include: facility/equipment inventory and history, work input control, job estimating, work scheduling and tracking, preventive and predictive maintenance, facility inspection and assessment, material management, and utilities' management.

8. Contracting Officer. Any person who, by appointment in accordance with procedures prescribed by the Procurement Regulation, has the authority to enter into and administer contracts and make determinations and findings with respect thereto, or has any part of such authority. The term includes certain authorized representatives of the Contracting Officer acting within the limits of their authority as delegated by the Contracting Officer as a Contracting Officer's Technical Representative (COTR).

9. Contractor. The term Contractor as used herein refers to both the prime Contractor and any subcontractors. The prime Contractor shall ensure that subcontractors comply with the provisions of this contract.

10. Contractor Quality Control (QC). A method used by the Contractor to control the quality of goods and services produced.

11. Facility. A term used to encompass land, buildings, structures and other real property improvements, including utility systems and collateral equipment. The term does not include operating materials, supplies, special tooling, special test equipment, and noncapitalized equipment. (See *NASA Financial Management Manual (FMM)* 9250-32 for criteria for capitalized equipment.) The term *facility* is used in connection with land, buildings (facilities having the basic function to enclose usable space), structures (facilities having the basic function of a research or operational activity), and other real property improvements.

12. Facility Manager. An employee designated responsibility for reporting on the utilization of a facility(s), and being assigned oversight of all maintenance, construction, and other related activities affecting the facility(s).

13 Government Quality Assurance (QA). A method used by the Government to provide some measure of control over the quality of purchased goods and services received.

14. Hazardous Waste. A waste material, or combination of wastes, that is toxic, corrosive, flammable or reactive and would cause substantial injury, serious illness or harm to humans, livestock or wildlife.

15. Maintenance. (1) Action taken to retain function (i.e., prevent failure). Actions include Preventive Maintenance, Predictive Testing and Inspection, lubrication and minor repair (such as

replacing belts and filters) and inspection for failure. (2) The recurring day-to-day, periodic, or scheduled work required to preserve or restore a facility to such a condition that it may be effectively utilized for its designated purpose. The term includes work undertaken to prevent damage to a facility that otherwise would be more costly to restore.

16. Predictive Testing & Inspection (PT&I). The use of advanced technology to assess machinery condition. The PT&I data obtained allows for planning and scheduling preventive maintenance or repairs in advance of failure.

17. Preventive Maintenance (PM). Also called time-based maintenance or interval-based maintenance. PM is the planned, scheduled, periodic inspection, adjustment, cleaning, lubrication, parts replacement, and minor (no larger than Trouble Call scope) repair of equipment and systems for which a specific operator is not assigned. PM consists of many checkpoint activities on items that, if disabled, would interfere with an essential Center operation, endanger life or property, or involve high cost or long lead time for replacement. In a shift away from reactive maintenance, PM schedules periodic inspection and maintenance at predefined time or usage intervals in an attempt to reduce equipment failures. Depending on the intervals set, PM can result in a significant increase in inspection and routine maintenance; however, a weak or nonexistent PM program can result in much more emergency work and costly repairs.

18. Proactive Maintenance. The collection of efforts to identify, monitor and control future failure with an emphasis on the understanding and elimination of the cause of failure. Proactive maintenance activities include the development of design specifications to incorporate maintenance lessons learned and to ensure future maintainability and supportability, the development of repair specifications to eliminate underlying causes of failure, and performing root cause failure analysis to understand why in-service systems failed.

19. Reliability Centered Maintenance (RCM). A maintenance strategy to provide the stated facilities and collateral equipment function, with the required reliability and availability, at the lowest cost and includes a process to determine the most effective approach to maintenance. The process involves identifying actions that, when taken, will reduce the probability of failure and which are the most cost effective. It seeks the optimal mix of Condition-based actions, other Time- or cycle-based actions, or Run-to-Failure.

20. Repair. That facility work required to restore a facility or component thereof, to a condition substantially equivalent to its originally intended and designed capacity, efficiency or capability or as currently required. It includes the substantially equivalent replacements of utility systems and collateral equipment necessitated by incipient or actual breakdown.

21. Response Time. Response time is defined as the time allowed the Contractor after initial notification of a work requirement to be physically on the premises at the work site with appropriate tools, equipment, and materials, ready to perform the work required.

22. Root Cause Failure Analysis. The process of exploring, in increasing detail, all possible causes related to a machine failure. Failure causes are grouped into general categories for further analysis. For example, causes can be related to machinery, people, methods, materials, policies, environment and measurements.

23. Service Requests. Service requests are *not* maintenance items, but are so often performed by facilities maintenance organizations they become part of the baseline. Service requests are requests for facilities-related work that is new in nature. They are requests initiated by anybody on the Center, are usually submitted on a form, often require approval by someone before any action is taken, and usually are planned and estimated, materials procured, and shop personnel discretely scheduled to do the work. The work may be alteration, construction or involve services. Examples are relocating an electrical outlet, installing new cabinets, moving office furniture and support for an outdoor ceremony.

24. Solid Waste. Refuse and other discarded solid materials resulting from commercial, industrial, residential, and community activities. It does not include hazardous wastes, infectious/medical wastes, solids or dissolved materials in domestic sewage, or other significant pollutants in water resources such as silt, dissolved or suspended solids in industrial waste, water effluents, dissolved materials in irrigation return flow, or other common water pollutants.

25. Space. A space is an interior/exterior building area to receive custodial services which may or may not be considered a room by common definition. Examples of spaces are definable sections of hallways, stairwells, lobbies, offices, porches, entrances, and elevators.

26. Trouble Calls. Trouble calls are generally called in by occupants of a facility, Facility Managers or maintenance workers. This category is composed of two types of work:

Routine Calls. Minor facility problems that are too small to be estimated and are generally responded to by grouping trouble calls by craft and location.

Emergency Calls. Calls that normally start as a trouble call and require immediate action to prevent loss of, or damage to Center/Installation property; to restore essential services that have been disrupted; or to eliminate hazards to personnel or equipment. Emergency work is usually a response-type work effort, often initially worked by trouble call technicians. Due to its nature, emergency work is not restricted to a level of effort such as Routine Calls.

ACRONYMS

ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing Materials
CMMS	Computerized Maintenance Management System
COSS	Center Operations Support Services
COTR	Contracting Officer's Technical Representative
EPA	Environmental Protection Agency
FFP	Firm Fixed Price

GFF	Government Furnished Facilities
GFM	Government Furnished Material
GIMS	Geographic Information Management System
GIS	Geographical Information System
HMCD	Hazardous Materials Control Board
HP	Horse Power
HTHW	High Temperature Hot Water
HVAC	Heating, Ventilation, and Air Conditioning
IAGP	Installation Accountable Government Property
IAW	In Accordance With
IDIQ	Indefinite Delivery/Indefinite Quantity
MBTU	Million British Thermal Units
MSDS	Material Safety Data Sheet
NECPA	National Energy Conservation Policy Act
NPDES	National Pollutant Discharge Elimination System
NPDMS	NASA Property Disposal Management System
NSMS	NASA Supply Management System
OPP	Operation Procedures Plan
OSHA	Occupational Safety and Health Administration
PM	Preventive Maintenance
PT&I	Predictive Testing & Inspection
QA	Quality Assurance
RCM	Reliability Centered Maintenance
RFQ	Request for Quotation
SARA	Superfund Amendment and Reauthorization Act
SOW	Statement of Work
SF	Square Foot
SY	Square Yard

ATTACHMENT J-C3.1

FINANCIAL REPORTING REQUIREMENTS

!INSERT SPECIFIC REQUIREMENTS AND PROCEDURES FOR THE CONTRACTOR TO REPORT FINANCIAL DATA AS REQUIRED BY THE CENTER/INSTALLATION!

ATTACHMENT J-C3.2

GOVERNMENT FURNISHED FACILITIES

!**********
NOTE TO SPECIFICATION WRITER: The Contractor should be self-sufficient, and provision of Government Furnished Facilities is highly discouraged and should be minimized.

List all facilities that are to be provided to the Contractor for Contractor use in performing contract work. Provide descriptive characteristics and, if practical, simple drawings of each facility showing Contractor areas, areas retained for use by the Government, etc.
**********!

The following facilities will be made available for use by the Contractor, as specified in Subsection C.3 "GOVERNMENT FURNISHED PROPERTY AND SERVICES".

BLDG. NO.	GROSS SF	LOC/ RM NO.	DESCRIPTION	NO. RM/ AREAS	NET SF
1365	17,051	100	Foyer	1	152
		101, 101A, 102A	Office Space	3	493
		113, 114, 115	Office Space	3	527
		116	Office Space	1	108
		109A	Conf. Rm.	1	883
		103	Conf. Rm.	1	227
			Total Net Sq. Ft		2972

ATTACHMENT J-C3.3

GOVERNMENT FURNISHED EQUIPMENT

!**********

NOTE TO SPECIFICATION WRITER: The Contractor should be self-sufficient, and provision of Government Furnished Equipment is highly discouraged and should be minimized.

List all tools and equipment that will be provided to the Contractor. Provide descriptive characteristics including manufacturer, model type, age, location, etc., if appropriate.

**********!

The following tools and items of equipment will be made available for use by the Contractor, as specified in Subsection C.3, "GOVERNMENT FURNISHED PROPERTY AND SERVICES".

DESCRIPTION	QTY	MFR & MODEL	AGE	LOCATION

ATTACHMENT J-C3.4

GOVERNMENT FURNISHED MATERIAL

!**********
NOTE TO SPECIFICATION WRITER: The Contractor should be self-sufficient, and provision of Government Furnished Material is highly discouraged and should be minimized.

List all materials that are to be provided to the Contractor. Provide descriptive characteristics including generic name, federal or commercial specifications, and quantities of issue.
**********!

The following material will be made available for use by the Contractor, as specified in Subsection C.3, "GOVERNMENT FURNISHED PROPERTY AND SERVICES".

ONE TIME ISSUE

DESCRIPTION	TYPE	QUANTITY
Fire Hydrants	Dry Barrel (4")	10 each
Valves	Gate (3")	5 each

CRITICAL RESERVE ITEMS

DESCRIPTION	TYPE	QUANTITY	MINIMUM
Valves	Alarm Check (4")	15 each	12 each

ATTACHMENT J-C3.5

LOCATIONS AND ROUTES FOR ENTRY TO AND EXIT FROM AIRFIELD AREAS

!**********
NOTE TO SPECIFICATION WRITER: A map showing the airfield and the routes and entry/exit locations would be more useful than a listing.
**********!

ATTACHMENT J-C4.1

TROUBLE CALL HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: This attachment includes example formats for displaying Trouble Calls and IDIQ work historical data. Good historical data is essential in the development of realistic Contractor bids. If complete information is not available, projections should be made based on the data that is available. The CMMS in this contract will collect such data for the future.
****

The data in this attachment represents the best data available from the !INSERT CENTER/ INSTALLATION! records for the type of work identified. This data is provided for information and should not be the basis for Contractor prices alone. It is furnished to indicate the types, approximate order of magnitude, and seasonal trends in the workload.

TROUBLE CALL WORK

NUMBER OF TROUBLE CALLS PER MONTH

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1999												
Emerg.												
Routine												
1998												
Emerg.												
Routine												
Total												

TRADES PERFORMING TROUBLE CALL WORK

The various trades listed below were used in performing the Trouble Calls shown in the chart above. The percentage of the total number of Trouble Calls shown in which each trade was involved is also shown below. For example, electricians were involved in approximately !INSERT NUMBER! percent (%) of the calls shown above. Some calls involved more than one trade.

TRADE/CRAFT	PERCENT (%) TRADE INVOLVEMENT
Carpenter	!INSERT NUMBER!
Electrician	!INSERT NUMBER!
Plumber/Pipefitter	!INSERT NUMBER!

Painter	!INSERT NUMBER!
Power Equipment Operator	!INSERT NUMBER!
Mover/Rigger	!INSERT NUMBER!
Sheet Metal Worker	!INSERT NUMBER!
Truck Driver	!INSERT NUMBER!
Machinist	!INSERT NUMBER!
Laborer	!INSERT NUMBER!

PERCENTAGE OF CALLS RECEIVED AFTER REGULAR HOURS

The following is the approximate percentage of total emergency, and routine Trouble Calls received during times other than when operating shifts were present including weekends/holidays.

	1999	1998
Emergency	8%	9%
Routine	2%	2%
Urgent	0	0

ACTUAL HOURS REQUIRED FOR COMPLETION

The following is representative of the actual hours required for completion of Trouble Calls during the specified years:

	1999	1998
0 - 4 Hours	93%	94%
4 - 8 Hours	5%	4%
8 - 16 Hours	1%	1%
Over 16 Hours	1%	1%

ATTACHMENT J-C4.2

PREVENTATIVE MAINTENANCE HISTORICAL DATA

!**********

NOTE TO SPECIFICATION WRITER: This attachment includes an example format for displaying Centers/Installations preventative maintenance program historical data. Good historical data is essential in the development of realistic Contractor bids. If complete information is not available, projections should be made based on the data that is available. Note that if the example format is used craft and instruction codes must be provided on separate sheets. This is one possible format. See Attachment J-C9 in the COSS for other formats.

**********!

Bldg. No.	Equip. No.	Description	Manufacturer Name	Model Number	Craft Code	Freq. Y-Q-M	Est. Hrs. Tenths	Instruction Code	Date Due Y-M
648	0230001	Switch,Air 4188	ITE		17	4Y	0020	111526288285	9810
	0230002	Air Handler With Elect Heat	Datamate	DME037E-PH1	30	Y	0030	0711192782909193ADAN	9811
	0230004	Water Cooler Filter			33	Y	0005	1720XX	9809
	0230007	Crane Bridge 5 Ton	Shepard Niles		28	Y	0020	BB	9803
					28	5Y	0040	86	0111
					28	Y	0040	BZBQ	9809
	0230008	Crane Bridge 5 Ton	Shepard Niles		28	Y	0020	BB	9804
					28	5Y	0040	86	0111
					28	Y	0040	BZBQ	9809
	0230016	Switch,Air 3009	General Electric		13	4Y	0010	11262882AJ	9206
	0230022	Dual Personnel Lift	Genie Industries	DPL-18	28	Y	0020	427388XX	9812
					28	5Y	0030	86	0212
	0230141B	Pump,Vacuum	Kinney	850	20	Q	0040	1113198090XXZZ	9805

ATTACHMENT J-C4.3

INDEFINITE DELIVERY AND INDEFINITE QUANTITY (IDIQ) WORK HISTORICAL DATA

!**********

NOTE TO SPECIFICATION WRITER: Data about past IDIQ work can be presented in several formats depending on the data available. To the extent possible data on the following should be presented in a format similar to that suggested for Trouble Calls.

- Number of jobs by month or quarter if possible
- Size of jobs by hours, materials or total cost; number of jobs by a cost range such as <$5000, $5000 - $10,000; etc. is sufficient.
- List of jobs with brief description of work such as " Install drop ceiling with lighting in conference room"
- Trades and crafts involved, in total or by range of jobs or by job

More and better data will allow better pricing by the offerors. If history data is poor, the most thoughtful projection of IDIQ work will be needed.

**********!

EXAMPLE OF ONE APPROACH

Work ID Number	Date Received	Hours Used	Material Cost	Craft ID	Actual Compl. Date	Description
0286K	26-Feb-97				19-Mar-97	Refill Comp Oil/Clean Up Spill
		0	1406			
		31	0	18		
		77	0	12		
Total		108	1406			
1683L	13-Mar-97				28-Apr-97	Install 6 Pulleys
		0	3101			
		48	31	18		
		10	0	10		
Total		58	3132			

ATTACHMENT J-C5.1

ENGINEERING SERVICES HISTORICAL WORKLOAD DATA

!**********
NOTE TO SPECIFICATION WRITER: Provide historical data and information on the preparation of facilities planning database(s), site approvals, field surveys, construction projects developed and similar information that would assist offerors in evaluating the magnitude of the engineering effort as it has been performed in the past. The type, availability and format for such data will vary widely among Centers/Installations. The key for the user is to remember that in an outcome-based solicitation full and open communication of data is in the best interests of the Government and the offerors. If in doubt, provide the data. Placing reports, files examples, drawings and the like in the Technical Reference Library can be an effective way to give offerors an opportunity to "experience" the past and current situation.
**********!

EXAMPLE:

Engineering and Subcontract Task Received from !INSERT DATE! to !INSERT DATE!

Task Number	Design Hours Used	Task Description	Task Cost
1069J6	258	Replace Air Handler in Bldg. #1593	26,823
1122L7	88	Replace Roof on Bldg. #2853	8,207

ETC.

ATTACHMENT J-C5.2

ENGINEERING SERVICES CURRENT RECORDS AND REPORTS

!**********
NOTE TO SPECIFICATION WRITER: This list should include all records and reports the Center/Installation currently maintains and prepares in the engineering services area. Designate in some manner those that the Contractor shall continue to maintain and produce. Also attach any sample formats for records or reports and or include past reports in the Technical Reference Library.
**********!

l. Records

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

2. Reports

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

ATTACHMENT J-C5.3

PERSONNEL QUALIFICATIONS

!**********

NOTE TO SPECIFICATION WRITER: Specific requirements for education, training, licenses, certifications and/or experience required by the Center/Installation should be specified in this attachment. Generally, with an outcome-based solicitation, the Contractor would be free to use personnel as desired and would be expected to comply with any legal or regulatory requirements without it being specifically stated.

**********!

ATTACHMENT J-C6.1

ENERGY AND WATER CONSERVATION HISTORICAL WORKLOAD DATA

!**********
NOTE TO SPECIFICATION WRITER: The type, availability and format for this data will vary widely among Centers/Installations. To some extent the data is basic to and provided with other functional paragraphs (see C.6.2.3.1). This attachment should include only workload data for conservation support for consumer activities other than those incorporated in subsections C.8, C.9, C.11, and C15. This attachment should include facilities and utilities systems descriptions, utility commodity consumption, Center/Installation operating patterns and intensity, size and mission of the Center/Installation, and similar information pertaining to energy and water conservation workload.
**********!

ATTACHMENT J-C6.2

ENERGY AND WATER CONSERVATION CURRENT RECORDS AND REPORTS

!**********
NOTE TO SPECIFICATION WRITER: This list should include all records and reports (including plans) the Center/Installation will require the Contractor to provide for the general management of the contract covered in Subsection C.6. Include only those items that the Center/Installation must have for its operation, remembering each requirement will add cost to the contract. Also attach any sample formats.
**********!

l. Records

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

2. Reports

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

ATTACHMENT J-C7.1

HAZARDOUS MATERIAL CONTROL BOARD MEETINGS HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Describe dates, duration, subjects, pages of minutes, and any other data regarding the HMCB meetings which would assist offerors in evaluating the nature of support the meetings would require.
**********!

DATE	LOCATION	DURATION	SUBJECT	PAGES OF MINUTES

ATTACHMENT J-C7.2

ENVIRONMENTAL SUPPORT SERVICES HISTORICAL WORKLOAD DATA

!**********
NOTE TO SPECIFICATION WRITER: Include in this attachment all historical data covering the environmental support services workload.
**********!

HAZARDOUS WASTE GENERATION HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include hazardous waste generation historical data covering more than one year, if available, and representative of contract requirements. Describe type, quantities, frequencies, generator, location, and other characteristics and circumstances regarding hazardous waste and hazardous material turn-in that would be helpful to offerors in determining the work to be done. Include medical and non-medical waste in this and other attachments as applicable.
**********!

This hazardous waste information is provided as historical data for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends.

Generator			Type	Waste Containers		Quantities Collected			
Org. Code	Date	Pick-up Location	Waste	Quantity	Size	FY !INSERT YR.! Gals	Lbs.	FY !INSERT YR! Gals	Lbs.
TOTALS COLLECTED									

HAZARDOUS WASTE ACCUMULATION AND STORAGE LOCATIONS

!**********
NOTE TO SPECIFICATION WRITER: Describe the location, size, physical features and characteristics of temporary and permanent hazardous material turn-in and waste accumulation and storage facilities now used. Inclusion of an annotated site plan would be beneficial.
**********!

HAZARDOUS WASTE SAMPLING AND TESTING HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Describe type, quantities, frequencies, and other characteristics and circumstances regarding hazardous waste sampling and testing that would be helpful to offerors with estimating the work to be done. Include hazardous waste sampling and testing historical data covering more than one year if available and representative of contract requirements.
**********!

This hazardous waste sampling and testing information is provided as historical data for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends in the workload.

Sample Date	Sample Type	Frequency	Location Sample Taken	Test Results

HAZARDOUS WASTE RECLAMATION HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include reclamation historical data covering more than one year, if available, and representative of contract requirements. Describe type, sizes, quantities, frequencies, and other characteristics and circumstances regarding hazardous waste reclamation that would be helpful to offerors with understanding the past reclamation activity.
**********!

This reclamation information is provided as historical data for information purposes only and is included to indicate the approximate order of magnitude involved in the !INSERT NAME OF CENTER/INSTALLATION! reclamation program.

Date	Frequency	Type Waste Reclaimed	Quantity	Location

LIST OF HAZARDOUS MATERIALS MANAGED

!**********
NOTE TO SPECIFICATION WRITER: Include a list of hazardous materials at the Center/Installation that the Contractor will be expected to manage during the term of the contract. Describe type, sizes, quantities, locations, usage, MSDS location, and other characteristics and circumstances regarding the hazardous materials inventory history that would be helpful to offerors when estimating this requirement. Describe the computer database or other method used to inventory and manage the materials and the MSDS program.
**********!

This list of hazardous materials is not intended to be a complete list but is provided for information purposes only. It is included to indicate the types sizes, quantities, locations, usage, MSDS location, and other characteristics and circumstances regarding the hazardous materials the Contractor may be managing during the term of the contract.

!INSERT LIST!

HAZARDOUS MATERIAL SPILL AND RELEASE HISTORY

!**********
NOTE TO SPECIFICATION WRITER: Describe type, sizes, quantities, location and other characteristics and circumstances about hazardous material spills and releases that would be helpful to offerors when estimating this requirement. Include spill response historical data covering more than one year, if available, and representative of contract requirements.
**********!

This spill response and release historical data is provided for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends of this service.

CALLED		COMPLETED		SPILL OR RELEASE			
DATE	TIME	DATE	TIME	LOCATION	DESCRIPTION		LABOR HOURS
					TYPE	SIZE/ QUANTITY	

ASBESTOS AND LEAD CONTAINING MATERIAL ABATEMENT WORK HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include asbestos and lead related abatement historical data covering more than one year if available and representative of contract requirements. List the projects with a brief describe of the work or reference project documents that should be available in the Technical Reference Library.
**********!

This asbestos and lead related abatement historical data is provided for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends.

DATE	LOCATION	DESCRIPTION OF WORK

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS

!**********
NOTE TO SPECIFICATION WRITER: List the current NPDES permits, date obtained, expiration date, and other characteristics and circumstances about the NPDES history that would be helpful to offerors when estimating this requirement.
**********!

!INSERT LIST!

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) SAMPLING AND ANALYSIS HISTORY

!**********
NOTE TO SPECIFICATION WRITER: Describe the types, locations, frequencies and other characteristics and circumstances about the sampling and measurements required by the NPDES and SWPP that would be helpful to offerors when estimating this requirement.
**********!

FACILITIES WITH KNOWN OR SUSPECTED ASBESTOS OR LEAD CONTAINING MATERIAL

!**********
NOTE TO SPECIFICATION WRITER: List the facilities and describe what is known or reference reports that contain further information. All reports should be available in the Technical reference Library.
**********!

Below is a list of asbestos and lead-based paint locations including suspect sites at !INSERT CENTER/INSTALLATION NAME!. The list includes the !INSERT CENTERS OR INSTALLATIONS! most current descriptive data for each location.

ASBESTOS AND LEAD-BASED PAINT		
LOCATION	DESCRIPTIVE DATA	SIGN OR LABEL INSTALLED

UNIVERSAL WASTE GENERATION AND RECYCLING HISTORY

!**********
NOTE TO SPECIFICATION WRITER: Describe the types and quantities generated and the quantities recycled. Describe any circumstances or conditions concerning the waste or the recycling that would be helpful to understanding the requirement.
**********!

EMISSION MONITORING PROGRAM HISTORY

!**********
NOTE TO SPECIFICATION WRITER: Briefly describe the current program including a current listing of stationary air emission units and a listing of activities, if any, authorized to continue use of CFCs or halons and the protective measures in place. Provide any data that may assist offerors in understanding the requirements for emission monitoring at the Center/Installation.
**********!

STORAGE TANK INVENTORY AND HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Provide the storage tank and major component inventory with references to drawings, if available, that should be in the Technical Reference Library. Additional information concerning condition or reports on last inspections should be summarized or included in the Library.
**********!

PCB CONTAINING EQUIPMENT INVENTORY

!**********
NOTE TO SPECIFICATION WRITER: Include a list of all electrical equipment, such as transformers, capacitors and other items that are known to contain PCBs at the Center/Installation for which the Contractor will be responsible. Additional information concerning condition or reports on last inspections should be summarized or included in the Technical Reference Library.
**********!

Below is a list of electrical equipment that is known to contain PCBs at the !INSERT CENTER OF INSTALLATION NAME!.

POLYCHLORINATED BIPHENYLS (PCBS)				
ITEM	DESCRIPTION INCLUDING CONDITION	LAST INSPECTED	LOCATION	PCB QUANTITY

ATTACHMENT J-C7.3

RECORDS AND REPORTS CURRENTLY MAINTAINED AND PREPARED

!**********
NOTE TO SPECIFICATION WRITER: Describe the environmental records and reports currently maintained and prepared. Indicate in some manner those that are required by law, regulation or NASA policy.
**********!

l. Records

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

* - Required by Law, Regulation or NASA Policy

2. Reports

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

- - Required by Law, Regulation or NASA Policy

ATTACHMENT J-C7.4

PERSONNEL QUALIFICATIONS

!**********

NOTE TO SPECIFICATION WRITER: Specific requirements for education, training, licenses, certifications and/or experience required by the Center/Installation should be specified in this attachment. Generally, with an outcome-based solicitation, the Contractor would be free to use personnel as desired and would be expected to comply with any legal or regulatory requirements without it being specifically stated.

**********!

ATTACHMENT J-C8.1

DESCRIPTION OF BUILDINGS AND STRUCTURES

!**********
NOTE TO SPECIFICATION WRITER: Using the Center/Installation's real property records, list and describe all buildings and structures that will be included in this contract. Include any marine structures and other miscellaneous structures such as bleachers, monuments, flag poles, guard houses, etc. General information such as age, size, use, type construction, number of floors should be provided to the extent practical. Additional detailed information about the buildings will be furnished in other attachments such as the supporting data for custodial services. Drawing numbers and other pertinent references should be identified. Drawings will be available Technical Library during the solicitation period. A table, narrative, listing or combination as suits the writer and the data may be used. The following table could be expanded as desired.
**********!

Bldg. No.	Facility Name/Use	Year Built	Gross Sq. Ft.	Type Structure	Drawing Numbers
100	Administration Bldg.	1943	127,000	two floor; reinf. concrete; flat built-up	5134050-5134056
101	Cafeteria	1969	15,000	one floor; steel & masonry; gable metal	5134078-5134086
NA	Picnic Pavilion	1978	500	wood frame; asphalt shingle	5134103

* - Critical Building or Structure

ATTACHMENT J-C8.2

INVENTORY OF BUILDING & STRUCTURES EQUIPMENT AND SYSTEMS

!**********
NOTE TO SPECIFICATION WRITER: The following "universal" format provides a structure for the inventory by placing all building systems and equipment in a single inventory document. Alternatively, the inventory can be grouped by systems, such as Heating, Ventilation, and Air Conditioning (HVAC), in separate inventory documents. Either way, the object is to provide sufficiently accurate and complete data for understanding and fair pricing by offerors.

This inventory should include all installed systems to be covered in the contract such as HVAC, refrigeration, compressed air, fire and security protection, elevators, cranes and hoists, mechanical/automated storage, sump and lift pumps, mechanical doors, loading docks, etc. Include systems and equipment in non-building structures such as marine structures.

Items are indicated as critical or non-critical based on the Center/Installation designation of systems and components of those systems. These systems have a higher performance standard than others and should be chosen carefully since the higher standard will increase costs.
**********!

Building/Structure No. _____

LOC.	EQUIPMENT DESCRIPTION	SIZE - CAPACITY	QTY	MFR. & MODEL.	CRITICAL YES/NO	EQUIP. No.
West wing	Air conditioner split system	20 Ton	1	Trane 2FSD68	Yes	A-05-001
West wing	Condensing unit	20 Ton	1	Trane 3SDF86	Yes	C-24-0220
East wing	Heat pump	5 Ton	1	Carrier VRB0803B	Yes	A-10-0333
North wing	Door, power operated, overhead	Elect. 2 HP	3	Overhead	No	D-01-0006

ATTACHMENT J-C8.3

BUILDINGS AND STRUCTURES CURRENT RECORDS AND REPORTS

!**********
NOTE TO SPECIFICATION WRITER: This list should include all records and reports (including plans) the Center/Installation will require the Contractor to provide for the general management of the contract covered in Subsection C.8. Include only those items that the Center/Installation must have for its operation, remembering each requirement will add cost to the contract. Also attach any sample formats or include them in the Technical Reference Library.
**********!

l. Records

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

2. Reports

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

ATTACHMENT J-C9.1

HIGH AND LOW VOLTAGE ELECTRICAL DISTRIBUTION SYSTEMS INVENTORY

!**********
NOTE TO SPECIFICATION WRITER: Identify and describe by rating, capacity, type, size, etc., all systems and equipment to be operated and maintained by the Contractor. Locations of equipment should also be given. Maps showing overhead and underground distribution lines, substations, manholes and vaults should be included. The following list is a sample.
**********!

The Contractor shall operate and maintain the systems and equipment listed below:

1. Overhead Distribution Lines:

a. 11,500 volt, 3 phase, 3 wire, delta connected, resistance grounded, approximate length 4.7 miles (see map).

b. 4,160 volt, 3 phase, 4 wire, wye connected, solidly grounded, approximate length 6.9 miles (see map).

2. Underground Distribution Lines:

a. 11,500 volt, 3 phase, 3 wire, delta connected, resistance grounded, 3 single conductor cables in duct, approximate length 2.6 miles (see map).

b. 4,160 volt, 3 phase, 4 wire, wye connected, solidly grounded, 4 single conductor cables in duct, approximate length 3.4 miles (see map).

c. 2,400 volt, 1 phase, 2 wire, solidly grounded, 1 cable with concentric neutral, directly buried, approximate length 2.5 miles.

d. 480 volt, 3 phase, ungrounded, one 3 conductor cable in duct (under or in piers), approximate length 6,000 feet (see map).

3. Outdoor Substations:

a. "North Sub", 69,000 volts - 11,500 volts, 2,500 KVA, 3 secondary feeders.

b. "Center Sub", 11,500 volts - 4,160 volts, 1,000 KVA, 5 secondary feeders.

4. Indoor Substations:

a. "Pier 6 Sub", 11,500 volts - 480 volts, 750 KVA, 6 secondary circuits.

b. "Admin Sub", 4,160 volts - 208/120 volts, 500 KVA, 3 secondary circuits.

5. Emergency Generation System:

a. Diesel engine emergency generator set, 450 kW, Caterpillar Model X-XXX, located in Building N-600.

b. Automatic transfer switch, 600 volt, 800 amps, 3 pole, ASCO Model X-XXX, located in Building N-600.

6. Exterior Lighting System:

a. Fifty street lights on steel poles with transformers in base, 400 watt, mercury vapor type with integral photo cell control in each.

b. Ten security lights, 1,000 watt, incandescent type mounted on Building A-50 with single time clock control.

ATTACHMENT J-C9.2

DESCRIPTION OF HEATING PLANT

!**********
NOTE TO SPECIFICATION WRITER: Describe in detail the combustion control system for boilers.
**********!

1. BOILER HEATING PLANTS: (BLDG NO. XXXX):

BLDG NO.	TYPE FUEL	FUEL HHV	TYPE BOILER	MFR	DESIGN MODEL	DESIGN CAPACITY	PRESSURE

!**********
NOTE TO SPECIFICATION WRITER: Major components should be listed here to give the Contractor some idea of the equipment type, system complexity, capability, and condition. Include equipment as appropriate, i.e. pumps, feedwater de-aeriator, tanks, fans, precipitators, baghouse, economizers, etc.
**********!

2. BOILER HEATING PLANTS, MAJOR COMPONENTS, BY FACILITY:

FACILITY NO. XXXX

EQUIPMENT	SIZE	NUMBER	MANUFACTURER

!**********
NOTE TO SPECIFICATION WRITER: A minimum of 12 months historical plant operational data should be listed for each boiler plant. Below insert “Steam” or “HTHW” as appropriate.
**********!

3. OPERATIONAL DATA:

FACILITY NO. XXXX

Month/ Year	Total !INSERT! Produced (lbs)	Total !INSERT! Exported (lbs/gals)	Fuel Used (gal)	Make-up Water (gal)	Maximum !INSERT! Demand (per hr)

ETC.

DESCRIPTION OF HEATING DISTRIBUTION SYSTEMS

!**********
NOTE TO SPECIFICATION WRITER: Describe the lengths of various pipe sizes, types of expansion joints. State whether the conduit is above ground or direct burial, number and types of steam traps and their locations, tunnels, trenches, number of facilities served, number of pumping stations, and any special or recurring problems such as flooding, etc.
**********!

MAJOR COMPONENTS	DESCRIPTION AND SIZE	LOCATION	DRAWING NO.

ATTACHMENT J-C9.3

GENERAL DESCRIPTIONS OF POTABLE AND INDUSTRIAL WATER SYSTEMS TO BE OPERATED AND MAINTAINED

!**********
NOTE TO SPECIFICATION WRITER: List and describe the water plants and distribution systems in detail..
**********!

The following facilities shall be operated and maintained under this contract :

Facility No. XXXX Description

Water Treatment Plant

Water Storage:
l00,000 Gallon Elevated

Storage Tank

Water Distribution:
Pumps

Water Lines

Valves

Fire Hydrants

Pressure Regulators

ATTACHMENT J-C9.4

GENERAL DESCRIPTION OF WASTEWATER FACILITIES AND EQUIPMENT TO BE OPERATED AND MAINTAINED

!**********
NOTE TO SPECIFICATION WRITER: All wastewater collection systems, treatment facilities, and associated equipment should be listed in this Attachment. Fixed equipment should be identified on system maps and facility drawings, if available, by index number.
**********!

The following wastewater collection systems and treatment facilities and equipment will be operated and maintained by the Contractor.

FACILITY	DESCRIPTION
Major Facility #l	
Major Facility #2	

EQUIPMENT	DESCRIPTION	QTY	MODEL NO.	MANUFACTURER	LOCATION
Clarifier					
Pumps					
Motors					
Chlorinators					
Fans					
Valves					
Storage Reservoir					
!ETC!					

ATTACHMENT J-C9.5

UTILITIES SERVICES WORKLOAD DATA

!**********
NOTE TO SPECIFICATION WRITER: Include in this attachment all historical data covering utilities services workload.
**********!

ATTACHMENT J-C9-6

UTILITIES SERVICES
CURRENT RECORDS AND REPORTS

!**********
NOTE TO SPECIFICATION WRITER: This list should include all records and reports (including plans) the Center/Installation will require the Contractor to provide for the general management of the contract covered in Subsection C.9. Include only those items that the Center/Installation must have for its operation, remembering each requirement will add cost to the contract. Also attach any sample formats or include them in the Technical Reference Library.
**********!

l. Records

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

2. Reports

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

ATTACHMENT J-C10.1

PAVEMENTS AND SURFACED AREAS INVENTORY

!**********
NOTE TO SPECIFICATION WRITER: List all roads, airfield pavements and other surfaced areas that will be maintained under this contract. The facilities shown below are for illustration only.
**********!

The following facilities shall be maintained under this contract:

1. Pavements.

A. Bituminous Pavements.

(1)	Airfield	
	(a) Runways	650,000 SY
	(b) Taxiways	290,000 SY
	(c) Aprons	35,000 SY
(2)	Roads and Streets	275,000 SY
(3)	Parking Areas	100,000 SY
(4)	Open Storage Areas	41,000 SY
(5)	Sidewalks	9,000 SY

B. Rigid Pavements.

(1)	Airfield	
	(a) Runways	0 SY
	(b) Taxiways	0 SY
	(c) Aprons	300,000 SY
(2)	Roads and Streets	100,000 SY
(3)	Parking Areas	50,000 SY
(4)	Open Storage Areas	10,000 SY
(5)	Sidewalks	20,000 SY

2. Miscellaneous Surfaces.

A.	Earth Surfaces (Roads)	1,000 SY
B.	Soil Aggregate Surfaces	
(1)	Roads and Streets	3,000 SY
(2)	Parking Areas	20,000 SY
(3)	Open Storage Areas	10,000 SY

3. Shoulders.

A.	Earth	10,000 SY
B.	Sod	13,000 SY
C.	Soil Aggregate	13,000 SY
D.	Bituminous (airfield)	220,000 SY

4. Drainage Systems.

A.	Paved Ditches and Channels (4′ to 20′ wide)	3.0 miles
B.	Drop Inlets	600 each
C.	Road and Airfield Culverts (18″ - 48″ diameter)	50 each
D.	Road and Airfield Culverts (60″ - 84‴ diameter)	15 each
E.	Concrete Box Culverts	3 each
F.	Headwalls (masonry)	70 each
G.	Metal End Sections	60 each
H.	Bridges, Concrete (20′ - 40′ span)	5 each

!ETC!

ATTACHMENT J-C10.2

CURRENT PAVEMENT SWEEPING SCHEDULE

!**********
NOTE TO SPECIFICATION WRITER: Also include the number of unscheduled sweeping requests for a representative period in this attachment or ensure that work is included in some other work history record such as service calls.
**********!

AREA	APPROXIMATE FREQUENCY	NO. OF UNITS PER OCCURRENCE	UNIT OF MEASURE
Roads/Streets			
Main Street (VIP route) (30′ wide x 5.0 miles)	1 per month	10	Curb-mile
First Street (30′ wide x 2.0 miles)	1 per quarter	4	Curb-mile
Second Street (24′ wide x 1.5 miles)	1 per quarter	3	Curb-mile
"A" Street (24′ wide x 2.0 miles)	1 per quarter	4	Curb-mile
Parking Areas At:			
Bldg 100- Admin Bldg.	1 per month	5,000	SY
Bldg 101- Computer Lab.	1 per quarter	8,000	SY
Bldg 102- Structures Lab.	1 per quarter	6,000	SY
Bldg 103- Test Lab.	1 per month	3,000	SY
Open Storage Areas At:			
Bldg 104- Warehouse	1 per quarter	20,000	SY

ATTACHMENT J-C10.3

INVENTORY OF TRAFFIC CONTROL DEVICES

!**********
NOTE TO SPECIFICATION WRITER: Insert a description and the number of traffic control devices to be maintained as part of this contract.
**********!

ATTACHMENT J-C10.4

ROADS, AIRFIELD PAVEMENTS, AND OTHER SURFACED AREAS WORKLOAD DATA

!**********

NOTE TO SPECIFICATION WRITER: Include in this attachment all historical data covering roads, airfield pavements, and other surfaced areas workload.

**********!

ATTACHMENT J-C10.5

RECORDS AND REPORTS CURRENTLY MAINTAINED AND PREPARED

!**********
NOTE TO SPECIFICATION WRITER: Describe the records and reports currently maintained and prepared. Indicate in some manner those that are required by law, regulation or NASA policy.
**********!

l. Records

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

* - Required by Law, Regulation or NASA Policy

2. Reports

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

- - Required by Law, Regulation or NASA Policy

ATTACHMENT J-C11.1

GROUNDS CARE INVENTORY

!**********
NOTE TO SPECIFICATION WRITER: Two approaches may be used in providing grounds care inventory information.

If accurate inventory information is available the preferred approach is to include detailed listings by parcel, similar to the examples provided below, that include information on the principal use and types and quantities of vegetation to be maintained. Drawings should also be included to illustrate the location of parcels, beds, shrubs, trees and major terrain features. One drawing illustrating all of this information should be used, if appropriate.

An alternate approach for Centers that do not have accurate and detailed inventory information is to include detailed drawings from which bidders may develop their own quantity estimates. Of course, area boundaries would have to be clearly defined and enough other details provided, such as where edging is to be performed, where flower beds are located, etc., to make accurate estimating viable. Also, unit prices in the Schedule of Deductions should be based on a price per month rather than a price per unit.
**********!

The following data and the attached drawings provide information on the location and geographic boundaries of the land areas maintained under the contract, and a summary of the types and quantities of vegetation that they contain. The number of plants, shrubs and trees to be pruned per area have an accuracy of +/- !REVISE IF NEEDED!15 percent.

Area	Dwg. No.	Use & size (ac)	Grass (ac)	Edge (LF)	Shrub & Plant (No.)	Flower Bed No./SF	Hedge (LF)	Prune Trees (ea.)
South lawn	01231	Admin 2.6	2.6	950	24	2/160	25	8
Main gate	01231	Open 10.4	10.4	185	87	12/600	125	36
Area 2	01233	Wooded 18	2.5	0	0	0	0	0

ATTACHMENT J-C11.2

REQUIREMENTS FOR REMOVING SNOW AND ICE

!**********
NOTE TO SPECIFICATION WRITER. This attachment can provide descriptions, drawings or simple sketches and any existing snow and ice removal plan. Identify all areas that require snow and ice removal including roads, airfield pavements, parking and storage areas, walks and building entrances, and any other areas. Address any priorities for removal or other special needs and identify any paved areas that may not require snow or ice removal to ensure no misunderstanding.
**********!

ATTACHMENT J-C11.3

IRRIGATION SYSTEM INVENTORY

!**********
NOTE TO SPECIFICATION WRITER: Indicate the location, type of control (clock or valve), and other pertinent information concerning each of the Government owned, permanently installed irrigation systems that will be available for the Contractor to use.
**********!

The Contractor shall operate, maintenance and repair the irrigation systems listed below.

MANUAL SYSTEMS

Location	Manual Valves	Number of Heads	Coverage (Square Feet)
Parcel 1	2	18	86,200
Parcel 2	1	24	127,000

!ETC!

ATTACHMENT J-C11.4

RECORDS AND REPORTS CURRENTLY MAINTAINED AND PREPARED

!**********
NOTE TO SPECIFICATION WRITER: Describe the records and reports currently maintained and prepared. Indicate in some manner those that are required by law, regulation or NASA policy.
**********!

l. Records

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

* - Required by Law, Regulation or NASA Policy

2. Reports

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

- - Required by Law, Regulation or NASA Policy

ATTACHMENT J-C12.1

REFUSE COLLECTION STATION
CURRENT LOCATIONS AND FREQUENCY OF COLLECTIONS

1. Residential Areas.

   a. Monday and Thursday, general household waste collection.

   b. Wednesday, collection of bulky items and debris.

2. Two To Eight Cy Containers.

LOCATION (BLDG. NO.)	NO. AND SIZE OF CONTAINERS	FREQUENCY M	T	W	TH	F	S	NO. OF WEEKLY COLLECTIONS
8	1 - 8 CY	X		X		X		3
15	2 - 2 CY			X				2
43A	1 - 6 CY			X				1
98	1 - 4 CY			X				1
174	1 - 6 CY			X				1
199	1 - 8 CY	X		X				2
220	2 - 8 CY*	X	X	X	X	X	X	12
33l	2 - 8 CY*	X	X	X	X	X	X	12
338	2 - 8 CY	X		X				4
364	1 - 4 CY			X				1
387	1 - 8 CY			X		X		2
498	1 - 8 CY		X					1
500	1 - 4 CY		X					1
504	1 - 8 CY			X				1
595	1 - 8 CY		X					1
605	1 - 8 CY*	X	X	X	X	X		5
815	5 - 8 CY	X	X	X	X	X		25
824	4 - 8 CY*	X	X	X	X	X		20
826	1 - 8 CY	X		X		X		3
859	1 - 6 CY		X					1
900	1 - 8 CY	X		X		X		3
902	1 - 8 CY		X		X			2
907	1 - 8 CY	X		X		X		3

* Denotes special liquid bottom containers. See Subsection C.26.b.(2)(a).

3. Small Refuse Containers (55 Gallons Or Less).

LOCATION (BLDG. NO.)	NO. AND SIZE OF CONTAINERS	FREQUENCY M	T	W	TH	F	S	NO. OF WEEKLY COLLECTIONS
13	2 - Drum	X		X				4
242	12 - Drum		X		X			48
243	9 - Drum		X		X			18
244	5 - Metal	X		X				10
245 *	3 - Drum	X		X				6
289	1 - Drum	X		X				2
345	3 - Drum			X				3
425 *	3 - Drum	X		X				6
1326	7 - Metal		X		X			14

* Stated frequency is for May 1 through September 30. Frequency may be decreased to a weekly basis for other months of the year.

4. Roll-Off Containers (20 And 40 Cubic Yard) Used To Collect Bulky Items (Refuse) And Recyclable Solid Wastes (Metal).

LOCATION (BLDG. NO.)	SIZE	TYPE OF WASTE	FREQUENCY
9	20 CY	Metal	On Call
45	20 CY	Refuse	On Call
116	40 CY	Metal	First Wed of Ea Month
Pier D	40 CY	Refuse	X X X X X X
Pier D	20 CY	Metal	X
248	40 CY	Refuse	On Call
567	40 CY	Refuse	X X X
721	40 CY	Metal	On Call
809	20 CY	Refuse	Every other Monday
1142	40 CY	Refuse	X X

5. Compactor Containers (30 And 40 Cubic Yard).

LOCATION (BLDG. NO.)	SIZE	TYPE OF WASTE	FREQUENCY
134	40 CY	COMPACTED	X X
312	30 CY	COMPACTED	X X
488	40 CY	COMPACTED	X

!ETC!

ATTACHMENT J-C12.2

CURRENT WASTE CONTAINER CLEANING FREQUENCY

Containers are cleaned at the frequencies below

1. Food Service Containers.

   All food services containers (special liquid bottom containers) are cleaned weekly. All remaining containers eight cubic yards (CY) or less, and all small refuse containers (55 gallons or less), are cleaned quarterly.

2. Compactor Containers

   The 40 CY compactor container located behind Building No. xxx, is cleaned after each collection. Remaining compactor containers are cleaned quarterly. Compactor units are cleaned concurrently with cleaning of compactor containers.

3. Roll-off Containers (20- and 40 CY)

   Twenty CY and 40 CY roll-off containers are cleaned semiannually.

ETC.!

ATTACHMENT J-C12.3

UNSCHEDULED AND SPECIAL EVENT REQUIREMENTS HISTORY

!**********
NOTE TO SPECIFICATION WRITER: Provide a listing of or estimated annual hours for unscheduled and special events during the year for which Contractor support will be required.
**********!

ATTACHMENT J-C12.4

RECORDS AND REPORTS CURRENTLY MAINTAINED AND PREPARED

!**********
NOTE TO SPECIFICATION WRITER: Describe the records and reports currently maintained and prepared. Indicate in some manner those that are required by law, regulation or NASA policy.
**********!

l. Records

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

* - Required by Law, Regulation or NASA Policy

2. Reports

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

- - Required by Law, Regulation or NASA Policy

ATTACHMENT J-C13.1

INVENTORY OF FACILITIES FOR CUSTODIAL SERVICES

!**********
NOTE TO SPECIFICATION WRITER: There are many other different ways that facility information may be displayed. The following are examples of some that have been used. Design a format to fit the specific needs of the Service Center, while ensuring that enough facility information is provided for Contractors to develop accurate bids.
**********!

The following facilities are to receive custodial services as specified in this contract:

FORMAT #1

Facility or Space	SF of Flooring				Rooms	Restroom Fixtures	Walk- off Mats	Elevators	Stair Flights	Congestion
	RT	CA	C	W						
Bldg. 6	5000	2000		500	17	10	4	2	2	H
Bldg. 2										
Cafeteria		5000	1000		4	7	2			H
Security office	4000	1000	500		5	3	1			M
Warehouse No. 1	500	500	20000	5000	3	8				L

Flooring Type Codes

C - Concrete	*Q* - Quarry Tile	*HPL* - High Pres. Plastic Lam.	*W* - Wood
CA - Carpet	*RT* - Resilient Tile	*NWF* - No Wax Floor	*O* - Othe
CT - Ceramic Tile	*T* - Terrazzo		

Restroom Fixtures are defined to include installed items attached to building plumbing system, including drinking fountains.

Congestion refers to the traffic and population density of the space. Congestion codes are:

H - High Congestion Area. Areas with high personnel movement such as entrance and lobby areas, hallways, cafeterias
M - Medium Congestion Area. Offices and administrative areas
L - Low Congestion Area. Storage areas, warehouses, equipment rooms, and computer facilities.

FORMAT #2

Building Number: 139N Map Grid Location: 7P

Floor or Room #	Space Type	Floor		Restroom Fixtures	Walk-off Mats	Congestion
		Surface	SF			
1st Flr	Lobby	T	500		2	H
100	Computer	HPL	2500		1	L
101	Storage	C	1200			L
102	Restroom, men	CT	500	5		L
103	Restroom, women	CT	800	6		L
2nd Flr	Corridor	RT	600			M
201	Office	CA	500			M
202	Office	CA	600			M

Building Summary

Square footage, less restrooms (in thousands) = 12.3
Number of walk-off mats = 3
Restrooms:
Number = 4
Number of fixtures = 16
Square footage (in thousands) = 2.3

Flooring Type Codes

C	-	Concrete	Q	-	Quarry Tile
CA	-	Carpet	RT	-	Resilient Tile
CT	-	Ceramic Tile	T	-	Terrazzo
HPL	-	High Pres. Plastic Lam.	W	-	Wood
NWF	-	No Wax Floor	O	-	Other

Restroom Fixtures are defined to include installed items attached to building plumbing system, including drinking fountains.

Congestion refers to the traffic and population density of the space.

Congestion codes are:

H - High Congestion Area. Areas with high personnel movement such as entrance and lobby areas, hallways, cafeterias

M - Medium Congestion Area. Offices and administrative areas

L - Low Congestion Area. Storage areas, warehouses, equipment rooms, and computer facilities

SUMMARY OF INVENTORY OF FACILITIES

!**********
NOTE TO SPECIFICATION WRITER: The example format shown below provides both the Government and Contractors a convenient summary of the quantity of services listed on all of the facility inventory sheets. If used, the specification writer *must* ensure that the quantities provided are accurate and agree with the quantities provided in the facilities inventory.
**********!

The following is a summary of the facility information provided on the previous pages for all the facilities to be serviced under this contract.

1. Floor Areas

	CONGESTION (SF)			TOTAL
	HIGH	MEDIUM	LOW	(SF)
a. Concrete (C)	_____	_____	_____	_____
b. Carpet (CA)	_____	_____	_____	_____
c. Ceramic Tile (CT)	_____	_____	_____	_____
d. High Pressure Plastic Laminate (HPL)	_____	_____	_____	_____
e. No Wax Floor (NWF)	_____	_____	_____	_____
f. Quarry Tile (Q)	_____	_____	_____	_____
g. Resilient Tile (RT)	_____	_____	_____	_____
h. Terrazzo (T)	_____	_____	_____	_____
I. Wood (W)	_____	_____	_____	_____
j. Other Flooring (O)	_____	_____	_____	_____

2. Restroom Fixtures _____EACH

3. Other Services
   a. Elevators _____EACH
   b. Flights of Stairs _____EACH
   c. Walk-off Mats _____EACH

ATTACHMENT J-C13.2

RECORDS AND REPORTS CURRENTLY MAINTAINED AND PREPARED

!**********
NOTE TO SPECIFICATION WRITER: Describe the records and reports currently maintained and prepared. Indicate in some manner those that are required by law, regulation or NASA policy.
**********!

l. Records

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

* - Required by Law, Regulation or NASA Policy

2. Reports

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

- - Required by Law, Regulation or NASA Policy

ATTACHMENT J-C14.1

SECURITY SERVICE LOCATIONS

!******** **********

NOTE TO SPECIFICATION WRITER: In this attachment the specification writer should include a site plan showing the locations where security services will be required. The identified locations should include the entrances/gates where security guards are to be located, the Center/Installation perimeter to be protected, the facility where the badging operation will be located, location of any facilities with security guards required, etc..

**********!

ATTACHMENT J-C14.2

CURRENT RECORDS AND REPORTS

!**********
NOTE TO SPECIFICATION WRITER: This list should include all records and reports the Center/Installation currently maintains and prepares. Designate in some manner those that the Contractor shall continue to maintain and produce. Also attach any sample formats for records or reports and or include past reports in the Technical Reference Library.
**********!

l. Records

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

2. Reports

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

ATTACHMENT J-C14.3

SECURITY SERVICE HISTORICAL WORK LOAD DATA

!**********
NOTE TO SPECIFICATION WRITER: Below is an example format for providing work load historical data. The specification writer should review this example and revise it to match Center/Installation requirements/data. The specification writer should provide data on more than one year if available and representative of contract requirements.
**********!

This work load data is provided as historical data for information purposes only and is included to indicate the approximate order of magnitude.

POPULATION DATA	1998	1999
!INSERT CENTER/INSTALLATION NAME!		
Civil Service Population		
Resident Contractor Population		
Other		
TOTAL POPULATION		
WORKLOAD DATA	1998	1999
PHYSICAL SECURITY SURVEYS		
Construction Reviews		
Perimeter Surveys		
INCOMING CLASSIFIED DOCUMENTS		
PERSONNEL SECURITY SERVICES		
Background Investigations		
Adjudications		
Security Clearance Orientations/Annual Refresher		
BADGING SERVICES		
Badges Issued (picture, visitor, transportation, etc)		
Non-Badged Visitors (VIPs)		
Incoming Visitor Security Clearance Verifications		
Terminations		
SECURITY SURVEYS		
Crime Prevention Surveys		
Self-Inspection/Assessments		

	1998	1999
DISPATCH/COMMUNICATIONS CENTER		
Alarm Responses (Non-Fire)		
Fire Protection Alarm Responses		
GUARD SERVICES		
Unscheduled Guard Services		
Guards for Crisis Situations		
Unscheduled Courier Service		
UNSCHEDULED COURIER SERVICES		
Within the !INSERT CENTER OF INSTALLATION!		
Within !INSERT NUMBER! Miles of !INSERT CENTER OF INSTALLATION!		
INVESTIGATIONS (CRIMINAL, PROPERTY, MISCELLANEOUS)		
Law Enforcement		
Traffic Collisions		
Crime Reports		
VIP Visits		
Administrative Traffic Citations		
Total Calls for Service		

SCHEDULED COURIER SERVICE

Origin/Destination	Time

!INSERT LOCATIONS AND TIMES SUCH AS FOLLOWS!

Main Cafeteria to Bank	1700 - 1800 Tuesday through Sunday
Visitor Center Store to Bank	1700 - 1800 Tuesday through Sunday

UNSCHEDULED COURIER SERVICE HISTORICAL DATA

!INSERT DATA!

CURRENT ROVING PATROLS

!INSERT A TABLE SHOWING CURRENT CENTER/INSTALLATION DATA SIMULAR TO THE FOLLOWING!

Post No.	Location	Hours/Day	Days/Week	Min. No. of Guards	Armed
5	Perimeter	24	7	1	Yes
6	Fuel Area	24	7	1	Yes
7	Bldgs/Equip. Checks	6	7	1	No
8	Flags	2	5	2	No
9 *	Traffic Control	10	5	2	No

* Traffic control required on working days only.

CURRENT ACCESS CONTROL

!INSERT A TABLE SHOWING CURRENT CENTER/INSTALLATION DATA SIMULAR TO THE FOLLOWING!

Post No.	Location	Hours/Day	Days/Week	Min. No. of Guards	Armed
1	Main Gate	24 7	2 *	Yes	
2 **	South Gate	12 (0600-1800)	5	1	No
3	East Gate	18 (0600-2400)	7	2 *	Yes
4 **	West Gate	4 (0600-0800 & (1600-1800)	5	1	No

*Minimum of two guards required only during the periods 0600 - 0800 and 1500 – 1700 daily. One guard is required during the balance of the specified periods.

**These gates are not opened on weekends and holidays.

CURRENT INTRUSION ALARMS MONITORING

!INSERT A TABLE SHOWING CURRENT CENTER/INSTALLATION DATA SIMULAR TO THE FOLLOWING!

ALARM SYSTEMS MONITORED FROM ROOM #23, BUILDING #1045

Building/ Equipment	Alarm Type	Monitored During the Periods	Type Signal	Response Time
1291	SECURITY	1600 - 0800 7 DAYS/WEEK	AURAL	10 MINUTES

ETC.

CURRENT SCHEDULED ESCORT SERVICE

!INSERT A TABLE SHOWING CURRENT CENTER/INSTALLATION DATA SIMULAR TO THE FOLLOWING!

Hours	Minimum Number Escorts (Working Days)	Minimum Number Escorts Sat/Sun/Holidays
0001 - 0730	1	1
0730 - 0900	4	1
0900 - 1300	3	1
1300 - 1630	4	1
1630 - 0001	2	1

UNSCHEDULED ESCORT SERVICE HISTORICAL DATA

!INSERT A TABLE SHOWING CURRENT CENTER/INSTALLATION DATA SIMULAR TO THE FOLLOWING!

Hours	Minimum Number on Call Escorts
0001 - 0730	0
0730 - 0900	2
0900 - 1300	1
1300 - 1630	2
1630 - 0001	0

SPECIAL EVENT SUPPORT

!**********
NOTE TO SPECIFICATION WRITER: If the requirements for a special event can be accurately described in advance, requirements for that event should be included in the firm, fixed-price portion of the contract. For example, the number of visitors (vehicles and people),the hours of the event, the areas involved in the event, the type of activities that occur, and other information that would be helpful to understanding should be provided. Fixed labor rates for security personnel should be included in Schedule B for those events that can not be predicted in advance.
**********!

Special events are situations where security services will be required on a one-time basis that will be significantly different in magnitude, type and/or intensity than normal. Security services for the scheduled events described below are included in the firm fixed price of the contract. Security services for any other events shall be ordered as IDIQ.

Scheduled Special Events:

(a) Annual Open House. !INSERT DESCRIPTION!

(b) Shuttle Launches !INSERT DESCRIPTION!

Unscheduled Special Event Historical Data:

(c) !INSERT DESCRIPTION!

CURRENT TRAFFIC CONTROL MANNED INTERSECTIONS

!INSERT A TABLE SHOWING CURRENT CENTER/INSTALLATION DATA SIMULAR TO THE FOLLOWING!

Intersection	Times
3rd Street and Hill Ave.	0630 - 0815 and 1515 - 1715
Adams and Jefferson Streets	0630 - 0815 and 1515 - 1715

ATTACHMENT J-C14.4

POST SECURITY CLEARANCE LEVELS

Contractor employees assigned to the posts indicated below must possess a security clearance at a level equal to or greater than the corresponding levels specified below.

Post	Clearance Level Required
5	CONFIDENTIAL
7	CONFIDENTIAL

ATTACHMENT J-C14.5

PERSONNEL QUALIFICATIONS

!**********
NOTE TO SPECIFICATION WRITER: The user must review State and other jurisdictional requirements for guard training, suitability and licensing, and revise the requirements below as necessary.
**********!

Prior to assignment to the Contractor's security force, an individual shall meet the following suitability criteria:

(a) Education. Possess a high school diploma or equivalent, or pass an equivalent performance examination designed to measure basic job-related mathematical, language, and reasoning skills. Possess the knowledge and ability to perform all required guard services duties. Must be able to read, write, and speak English.

(b) Felony Convictions. Have no felony convictions and no convictions that reflect on the individual's reliability.

(c) Age. Be 21 years of age or older or be an honorably discharged veteran. Must be 21 years of age to be armed.

(d) Citizenship. Be a citizen of the United States.

(e) Physical Qualifications. Pass a physical examination given by a licensed physician or health care professional prior to assignment and yearly there after. Two copies of a written certification from the examining physician that the employee meets the following physical qualifications shall be provided to the Contracting Officer following each examination. The following physical requirements apply for all security force personnel:

1 Vision. Distant visual acuity in each eye shall be correctable to 20/30 in the better eye and 20/40 in the other eye with eyeglasses or contact lenses. If uncorrected distance vision is not at least 20/40 in the better eye, the individual shall carry an extra pair of corrective lenses. Near visual acuity, corrected or uncorrected, shall be at least 20/40 in the better eye. Field of vision must be at least 70 horizontal meridian in each eye. Where corrective eyeglasses are required, they shall be of the safety glass type. The use of corrective eyeglasses or contact lenses shall not interfere with an individual's ability to effectively perform assigned security job duties during normal or emergency operations. The ability to distinguish red, green, and yellow colors is required. Loss of vision in one eye is disqualifying. Glaucoma shall be disqualifying unless controlled by acceptable medical or surgical means, provided such medications, as may be used for controlling glaucoma do not cause undesirable side effects which adversely affect the

individuals ability to perform assigned security job duties, and provided the visual requirements stated above are met. On-the-job evaluation shall be used for individuals who exhibit a mild color vision defect.

2 Hearing Individuals shall not have hearing loss in the better ear greater than 30 decibels average at 500 Hz, 1000 Hz, and 2000 Hz, with no level greater than 40 decibels at any one frequency (by ISO 389 "Standard Reference Zero for the Calibration of Purtone Audiometer" (1975) or ANSI S3.6-1969 (r. 1973) "Specifications for Audiometers"). Use of a hearing aid is acceptable provided suitable testing procedures demonstrate auditory acuity equivalent to the above stated requirement and its use does not decrease the effective performance of the individual's assigned guard duties during normal or emergency operations.

3 Physical Condition. Each security services employee shall be in good physical condition, able to protect themselves and others, and be able to withstand sudden emotional stress and physical exertion in apprehension of suspects and violators. Pursuit may be on foot, requiring running, jumping, climbing, and/or crawling, followed by physical contact to overpower the violator as necessary.

4 Diseases. Individuals shall have no established medical history or medical diagnosis of epilepsy or diabetes. Where such a condition exists, the individual shall provide medical evidence that the condition can be controlled with proper medication so that the individual will not lapse into a coma or unconscious state while performing assigned security duties.

5 Addiction. Individuals shall have no established medical history or medical diagnosis of habitual alcoholism or drug addiction. Where such a condition has existed, the individual shall provide certified documentation of having completed a rehabilitation program that would give a reasonable degree of confidence that the individual would be capable of performing assigned security duties.

6 Other Physical Requirements. An individual who has been incapacitated due to serious illness, injury, disease, or operation, which could interfere with the effective performance of assigned security duties, shall, prior to resumption of such duties, provide medical evidence of recovery and ability to perform such duties.

(f) Firearms Proficiency Training and Qualification. Each member of the security force required to carry a weapon shall be trained and qualified to meet the minimum standards specified in the !INSERT NAME OF CENTER OR INSTALLATION! Security Manual, including initial training and qualification, sustainment training, and annual re-qualification.

ATTACHMENT J-C15.1

SUPPLY AND TRANSPORTATION SERVICES WORKLOAD DATA

!**********
NOTE TO SPECIFICATION WRITER: Include in this attachment all historical data covering the supply and transportation services workload.
**********!

SHIPPING AND RECEIVING HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Below are examples of shipping and receiving historical data. The specification writer should review these examples and revise/replace columns to match Center/Installation requirements/data. The specification writer should provide data on more than one year if available and representative of contract requirements.
**********!

This shipping and receiving information is provided as historical data for information purposes only and is included to indicate the approximate shipping and receiving order of magnitude, transportation types used, and seasonal trends in the workload.

SHIPPING DATA - FY 99

Month	Shipments	Pieces	Weight	Hazmat	Air	Surface	GBL	Domestic	Internat.
Oct	206	486	306,620	18	166	40	40	180	26
Nov	300	391	114,378	29	245	55	15	271	29
Dec	250	326	149,777	21	206	44	15	223	27
Jan	300	446	218,721	8	261	39	10	267	33
Feb	250	291	55,376	11	216	34	15	227	23
Mar	300	442	190,982	7	258	42	19	266	34
Apr	300	368	60,856	21	268	32	17	273	27
May	350	463	53,784	11	312	38	12	319	31
Jun	350	525	260,726	14	300	50	33	314	36
Jul	250	301	72,531	15	212	38	28	225	25
Aug	200	259	70,682	15	176	24	19	177	23
Sep	250	316	202,152	11	213	37	26	222	28
Totals	3,306	4,614	1,756,585	181	2,833	473	249	2,964	342

RECEIVING DATA - FY 99

Month	Disposal Rec's.	Direct to User	Stock	J.I.T.	Monthly total	Surface	Air	GBL/Collect
Oct	539	1,595	113	0	2,247	1,950	297	18
Nov	0	1,113	218	777	2,108	1,871	237	15
Dec	50	1,443	219	745	2,457	2,208	249	16
Jan	226	1,038	120	1,365	2,749	2,508	241	8
Feb	232	1,441	174	1,518	3,365	3,071	294	13
Mar	268	2,098	118	1,661	4,145	3,643	502	10
Apr	591	1,711	288	1,648	4,238	3,787	451	15
May	378	1,662	251	1,683	3,974	3,492	482	14
Month	Disposal Rec's.	Direct to User	Stock	J.I.T.	Monthly total	Surface	Air	GBL/Collect
Jun	873	1,688	223	1,515	4,299	3,766	533	11
Jul	240	1,607	236	1,645	3,728	3,299	429	12
Aug	325	1,816	162	1,463	3,766	3,316	471	21
Sep	323	2,393	175	1,319	4,210	3,797	413	18
Totals	4,045	19,605	2,297	15,339	41,286	36,708	4,599	171

PROPERTY SURVEY HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include property survey historical data covering more than one year if available and representative of contract requirements.
**********!

This property survey information is provided as historical data for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends in the property survey workload.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1998	4	2	5	6	4	3	8	1	9	10	3	5	60
1999	3	4	6	8	3	1	5	3	12	4	4	3	56

PERSONAL PROPERTY DECALING AND BARCODING HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include personal property decaling and barcoding historical data covering more than one year if available and representative of contract requirements. The specification writer should review this example and revise/replace columns to match Center/Installation requirements/data.
**********!

This personal property decaling and barcoding information is provided as historical data for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends in the workload.

Org. Code	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
A	0	0	2	0	0	0	0	1	0	0	0	0
AA	5	3	11	3	8	6	3	8	9	8	0	2
AD	10	4	0	0	14	3	11	24	7	1	10	8
C	0	0	3	0	0	2	0	0	0	0	0	0
CF	2	4	4	10	0	6	0	0	2	4	0	0
D	0	2	1	1	12	1	3	6	2	1	0	0
DE	0	0	0	0	2	0	0	0	0	0	0	0
I	0	9	1	0	1	0	2	1	0	0	0	0
IC	5	17	16	16	35	17	16	8	32	11	15	0
IN	12	13	29	8	5	15	13	0	93	14	16	4

!ETC!

CUSTODIAL STORAGE WITHDRAWAL AND DELIVERY HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include custodial storage withdrawal and delivery historical data covering more than one year if available and representative of contract requirements. The specification writer should review this example and revise/replace columns to match Center/Installation requirements/data.
**********!

This custodial storage information is provided as historical data for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends in the custodial storage withdrawal and delivery workload.

MONTH	WITHDRAWALS		DELIVERIES	
	FY-96	FY-97	FY-96	FY-97
JAN	3	4	1	4
FEB	7	3	5	2
MARCH	2	4	0	3
APRIL	3	4	2	4
MAY	2	4	0	4
JUNE	0	1	0	0
JULY	4	5	3	3
AUG	8	3	6	1
SEPT	2	3	1	2
OCT	0	2	0	0
NOV	3	2	3	1
DEC	0	1	0	1
T0TAL	34	36	21	25

ANNUAL WALK-THROUGH INSPECTION HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include annual walk-through inspection historical data covering more than one year if available and representative of contract requirements.
**********!

This annual walk-through inspection information is provided as historical data for information purposes only and is included to indicate the approximate order of magnitude involved in the annual walk-through inspection.

ORG. CODE	LINE ITEMS		ORG. CODE	LINE ITEMS
A	34		JH	386
AA	1,440		JI	1,170
AD	1,224		JM	998
AF	3,149		JP	436
AO	7,637		O	24
AP	661		OF	35
C	30		OP	3,866

CF	357		PM017	519
CR	79		S	129
D	151		SF	2,170
DE	27		SG	1,527
DK	92		SL	3,138
DL	53		SS	2,555
DO	16		ST	3,112
DQ	573		Y	10
DX	422		YA	23
I	49		YB	731
IC	1,795		YF	174
IN	2,377		YR	61
IS	4,594		YS	496
IZS	336		YZ	102
J	54		N	20
JA	446		T	39
JE	2,550		W	86
JF	1,527			
TOTAL	29,673		TOTAL	21,807

LAUNDRY SERVICE HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include laundry service data for more than one year if available and representative of contract requirements.
**********!

This laundry service historical data is provided for information purposes only and is included to indicate the approximate order of magnitude, delivery locations, and seasonal trends of laundry service.

MONTHLY LAUNDRY SERVICE DATA

MONTH: OCTOBER 1999 .

#	MARK #	ORIG. CODE	LCT	SCT	SMK	COV	SHEET	SCR SUIT	PL CSE	APR	BT	SHP TWL	DR. TWL	3 X 4 MAT	4 X 6 MAT
1	21	SF				55						200			
2	106	SLO	124												1
3	123	STM	4												
4	127	AOW	51			123						10			
5	139	STR	24			2					20				
6	142	SLR	20											2	
7	200	OPE				20						12			
8	202	JMF		36		24									
10	204	AO	9	9		222	4		4						
15	216	YSX	14	6		17							68		
								!ETC!							
TOTAL FOR OCTOBER															

LEDGEND

LCT =	Labcoat	PL CSE =	Pillow case
SCT =	Shopcoat	APR =	Apron
SMK =	Smock	BT =	Bath towel
COV =	Coverall	SHP TWL =	Shopcoat
SHEET =	Bed sheet	DR TWL =	Doctor towel
SCR SUITE =	Scrub suite		

WEEKLY LAUNDRY RECEIPTS FOR MARCH 1999

MARK # DATE	ORIG. CODE	LCT	SCT	SMK	COV	SHEET	SCR SUIT	PL CSE	APR	BT	SHP TWL	DR. TWL	3 X 4 MAT	4 X 6 MAT
21	SF													
3/5/97					16						122			
3/12/97														
3/19/97					10						95			
3/26/97														
TOTAL					26						217			
106	SLO													
3/5/97		70												
3/12/97														
3/19/97		65												
3/26/97														
TOTAL		135												
123	STM													

!ETC.!

SUMMARY OF FY 1999 LAUNDRY SERVICE

MONTH	LCT	SCT	SMK	COV	SHEET	SCR SUIT	PL CSE	APR	BT	SHP TWL	DR. TWL	3 X 4 MAT	4 X 6 MAT
10	1055	444	4	1233	4	24	4	46	412	222	152	6	8
11	1020	420	4	1188	4	20	4	48	426	220	146	5	9
12	823	358	2	925	2	16	2	42	386	186	130	2	2
1	958	403	3	988	2	18	2	44	328	232	138	8	6
2	1056	426	6	1245	6	22	6	46	412	222	158	4	5
3	822	459	4	1198	4	24	4	44	410	224	168	6	8
4	1250	446	3	1203	6	22	6	42	408	236	162	8	9
5	1055	420	2	1162	4	26	4	46	420	228	152	4	10
6	1102	445	5	1403	4	20	4	44	418	220	148	8	8
7	993	436	4	1209	4	18	4	44	412	218	146	6	5
8	1029	426	3	1210	2	20	2	48	422	224	158	5	6
9	1185	448	5	1250	6	22	6	46	412	226	152	9	4
TOTAL	12348	5131	45	14214	48	252	48	540	4866	2658	1810	71	80

LAUNDRY COORDINATORS

#	MARK #	ORG. CODE	COORDINATOR	MAIL STOP	PHONE	DELIVERY POINT	NOTE
1	21	SL	! INSERT NAMES !	T10A	4-5719	Bldg. 221A. Rear door	
2	106	SLO		240A-3	4-4715	Bldg. 236, downstairs	
3	123	STM		234-1	4-0271	Bldg. 233, Hallway	
4	127	AOW		206-1	4-5849	Bldg. 206E Highbay	
5	139	STR		239A-3	4-5201	Bldg. 239, Rm 206	
6	142	SLR		242-3	4-1457	Bldg. 242, Bathroom	Cleaning first week EA. month
7	200	OPE		211-8	4-5134	Bldg. 211, Rm 144	
8	202	JMF		211-10	4-5330	Bldg. 211, Rm 160	

!ETC.!

DRY ICE HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include dry ice delivery data for more than one year if available and representative of contract requirements. The specification writer should review this example and revise/replace columns to match Center/Installation requirements/data.
**********!

This dry ice historical data is provided for information purposes only and is included to indicate the approximate order of magnitude, delivery locations, and seasonal trends of dry ice delivery.

DATE	QUANTITY IN POUNDS	DELIVERY LOCATION		POINT OF CONTACT	TELEPHONE NUMBER
		BUILDING	ROOM		

DISPATCHING SERVICE HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include dispatching service historical data covering more than one year if available and representative of contract requirements. The specification writer should review this example and revise and/or replace columns to match Center/Installation requirements and data.
**********!

This dispatching historical data is provided for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends of this service.

VEHICLE	VEHICLE	TRIP	DISPATCHED		RETURNED			
ID NO.	DESCRIPTION	TICKET	DATE	TIME	ESTIMATED		ACTUAL	
		NUMBER			DATE	TIME	DATE	TIME

HEAVY AND SPECIALIZED EQUIPMENT SERVICE CALL HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include heavy and specialized equipment service call historical data covering more than one year, if available and representative of contract requirements. The specification writer should review this example and revise/replace columns to match Center/Installation requirements/data.
**********!

This heavy and specialized equipment service call historical data is provided for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends of this service.

FY 1998	NUMBER		HOURS	
MONTH	ON SITE	OFF SITE	ON SITE	OFF SITE
OCTOBER	53	79.5	62	62.5
NOVEMBER	35	49	52	79
DECEMBER	60	75	52	78
JANUARY	65	95	73	104.5
FEBRUARY	73	101	79	111
MARCH	99	148.5	72	99.5
APRIL	91	100.5	63	64
MAY	81	121.5	62	84.5
JUNE	94	135	45	65.5
JULY	91	136.5	39	56.5
AUGUST	38	28.5	70	105
SEPTEMBER	31	38.5	21	30.5
TOTAL FY 1998	811	1108.5	690	940.5

NOTE:

For this solicitation, the maximum labor hours that can be expended per service call is as follows:

1. On !INSERT CENTER/INSTALLATION NAME! !INSERT NUMBER! hours.

2. Off !INSERT CENTER/INSTALLATION NAME! !INSERT NUMBER! hours.

FURNITURE MOVE, PICK-UP AND DELIVERY HISTORICAL DATA

!**********

NOTE TO SPECIFICATION WRITER: Include furniture move, pick-up and delivery historical data covering more than one year, if available and representative of contract requirements. The specification writer should review this example and revise and/or replace columns to match Center/Installation requirements and data.

**********!

This furniture move, pick-up and delivery service historical data is provided for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends of this service.

YEAR	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	TOTAL
FY 1999													
INTER OFFICE MOVES													
FURNITURE PICK—UP													
FURNITURE DELIVERY													
MONTHLY TOTAL													
FY 1998													
INTER OFFICE MOVES													
FURNITURE PICK—UP													
FURNITURE DELIVERY													
MONTHLY TOTAL													

SCRAP DISPOSAL HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include scrap disposal historical data covering more than one year, if available and representative of contract requirements. The specification writer should review this example and revise and/or replace columns and rows to match Center/Installation requirements and data.
**********!

This scrap disposal service historical data is provided for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends of this service.

MONTH	NUMBER OF SCRAP LINE ITEMS PROCESSED			TOTAL
	FY 1997	FY 1998	FY 1999	
OCTOBER				
NOVEMBER				
DECEMBER				
JANUARY				
FEBRUARY				
MARCH				
APRIL				
MAY				
JUNE				
JULY				
AUGUST				
SEPTEMBER				
TOTAL				

HAZARDOUS MATERIAL RECEIVED AND PROCESSED

!**********
NOTE TO SPECIFICATION WRITER: Include hazardous material historical data that is representative of contract requirements. The specification writer should review this example and revise and/or replace columns and rows to match Center/Installation requirements and data.
**********!

This hazardous material historical data is provided for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends of this service.

BLDG	RM	MFR.	TRADE NAME	CHEM. NAME	CHEM-1	CHEM-2	QTY	UNITS	MAX. DAILY	AVG. DAILY	ANNUAL USE	ANNUAL WASTE	DAYS ON SITE
251	Bay # 3	Aerosol Systems	Chain Lube	Chain Lube	Methylene Chloride	N/A	1	pt	1	1	8	0	365
251	Bay # 3	Liquid Air Corp.	Acetylene, Ethyne	Acetylene, Ethyne	Alkyne	C2H2	0	cu ft	0	0	0	0	365
251	Bay # 3	N/A	Brake Fluid	Dot-3 Standard Heavy Duty Brake Fluid	Polyglycol Ethers	N/A	1	gal	1	1	12	5	365
251	Bay # 3	CRC Industries	Brakleen	Trichloroethane	Trichloroethane	Perchloroethylene	1	pt	4	2	48	0	365
251	Bay # 3	Permatex	Disk Brake Quiet	Acetone	Ethyl Acetate	Aliphate Naphtha	1	pt	1	1	1	0	365
251	Bay # 3	Red Line Synthetic Oil Corp.	Red Line Lead Substitute	Mixture	Aliphatic Hydrocarbon Mixture	N/A	5	gal	0	0	0	0	365
251	Bay # 4	Terminal Packaginhg Corp	Antifreeze Waste	Waste Ethylene Glycol	Ethylene Glycol	Diethylene Glycol	55	gal	55	0	0	55	365
251	Bay # 4	Imperial oil Company	Motor Oil 10W30	Motor Oil 10W30	Petroleum Base oil	Additives	65	gal	65	24	110	165	365
251	Bay # 4	Mobil Oil & Imprial Oil	Oil Waste	Waste Oil	Petroleum Base oil	N/A	55	gal	55	5	220	220	365

RE-UTILIZATION TRANSFERS HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include re-utilization transfers historical data covering more than one year, if available and representative of contract requirements. The specification writer should review this example and revise and/or replace columns and rows to match Center/Installation requirements and data.
**********!

This re-utilization transfer's historical data is provided for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends of this service.

DATE	ITEM DESCRIPTION	STOCK NUMBER	TRANSFERRED		
			AGENCY	LOCATION	SHIP METHOD

SCHOOL DONATED ITEM HISTORICAL DATA

!**********
NOTE TO SPECIFICATION WRITER: Include all items donated to schools for more than one year, if available and representative of contract requirements. The specification writer should review this example and revise and/or replace columns and rows to match Center/Installation requirements and data.
**********!

This school donation historical data is provided for information purposes only and is included to indicate the approximate order of magnitude and seasonal trends of this service.

DATE	DONATED ITEM	SCHOOL	
		NAME	LOCATION

SCHEDULED OFF-SITE HAULING SERVICES

!**********
NOTE TO SPECIFICATION WRITER: List adequate information about scheduled off-site hauling services for the bidder to determine the cost of providing the service. The specification writer should provide the data on more than one year, if available and representative of contract requirements.
**********!

This attachment specifies the scheduled off-site hauling services to be performed by the Contractor as part of the firm fixed-price work under the terms of this SOW.

DELIVERY LOCATION/SITE	DISTANCE MILES	SCHEDULE/ FREQUENCY	DESCRIPTION OF ITEMS TO BE DELIVERED

JUST-IN-TIME CUSTOMER LIST

!**********
NOTE TO SPECIFICATION WRITER: Below is an example of a JIT customer list. The specification writer should review this example and revise and/or replace columns to match Center/Installation requirements and data.
**********!

*** * EXAMPLE * ***

CUST. ID	NAME	ORG CODE	TELEPHONE NO. (720)	BUIDLING NUMBER	ROOM NUMBER
03638	JACK HILLERMAN	SS	245-4223	2045	230
02390	J. B. SMITH	SL	245-0172	2460A	144
03572	RICHARD STOLE	II	245-0388	T23D	100

!ETC.!

INVENTORY SCHEDULING HISTORICAL DATA

(INCLUDES ANNUAL RANDOM SAMPLING)

!**********

NOTE TO SPECIFICATION WRITER: Include inventory scheduling historical data covering more than one year, if available and representative of contract requirements. The specification writer should review this example and revise and/or replace columns and rows to match Center/Installation requirements and data.

**********!

This inventory scheduling historical data is provided for information purposes only and is included to indicate the approximate order of magnitude.

Run No.	Id No.	SC/OC	Inv. Type = FOC Object Class	Inventory Time Frame		Line Item Count	R emarks
				From	To		
1.	94 - 03	1 01/AC/CC	2624, 2625, 2627, 2628	13 JUN 1994	20 JUN 1994	846	Office Supplies And Photographic Materials
2.	95 - 02	1 01/AC/CC	2611, 2616, 2619	05 DEC 1994	16 DEC 1994	1,850	Building Materials, General Maint.Materials And Harware
3.	95 - 03	1 01/AC/CC	2612, 2615, 2617, 2621	16 MAR 1995	29 MAR 1995	1,175	Chems, Fuels & Lubrs, General Oper.Matls, Instrument & Missile, Acft.
4.	95 - 04	1 01/AC/CC	2618, 2622, 2626	05 JUN 1995	16 JUN 1995	1,224	Gen. Service Matls, Metals And Pipes, Valves, And Fittings
5.	95 - 05	1 01/AC/CC	2613, 2614	14 AUG 1995	25 AUG 1995	1,541	Electrical Materials And Electronic Materials
6.	96 - 01	3/01	RANDOM SAMPLING	04 OCT 1995	05 OCT 1995	APPROX. 200	Approximately 20% Of S/C - 3/01

ATTACHMENT J-C15.2

BUS SERVICE ROUTES AND FREQUENCIES

!**********

NOTE TO SPECIFICATION WRITER: The Center's/Installation's bus schedule including frequencies and a site plan with the bus route and stops show should be provided in this Attachment. The specification writer should include historical data on the rider numbers, and if data is available this should be broken down by stop. The historical data should be for more than one year if available and representative of contract requirements.

**********!

ATTACHMENT J-C15.3

RECORDS AND REPORTS CURRENTLY MAINTAINED AND PREPARED

!**********
NOTE TO SPECIFICATION WRITER: Describe the environmental records and reports currently maintained and prepared. Indicate in some manner those that are required by law, regulation or NASA policy.
**********!

l. Records

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

* - Required by Law, Regulation or NASA Policy

2. Reports

SPECIFICATION REFERENCE	REPORT TITLE	WHEN SUBMITTED	SUBMITTED TO	SAMPLE ATTACHED

- - Required by Law, Regulation or NASA Policy

ATTACHMENT J-C16

EQUIPMENT PROCUREMENT CLAUSES AND IN-SERVICE AND ACCEPTANCE CRITERIA

These clauses and criteria have been extracted and modified as necessary from the NASA Reliability Centered Maintenance Guide for Facilities and Collateral Equipment.

a. Procurement Clauses. During equipment procurement, Table J-C16-1 should be used to identify the technology used to assess equipment condition for the type of equipment being procured. The applicable contract clauses referred to in and following Table J-C16-1 shall be used in Requests for Proposals (RFPs) and Requests for Quotations (RFQs); in procuring new, or replacement of equipment; and in obtaining re-work of existing equipment in this contract. The number of the clause located under the column heading "Contract Clause" refers to the paragraph number following Table J-C16-1. The clauses may be used without modification; however, they will have to be renumbered to fit the organization of the specification in which they are used.

b. In-Service And Acceptance Criteria. In-service and acceptance criteria for vibration, thermography, electrical testing, bearing selection, and oil analysis (hydraulic fluids, transformer oil, and lubricating oils) are provided. Proactive techniques such as alignment and balance criteria, age exploration (AE), and Facilities Condition Assessment (FCA) are addressed.

CONTRACT CLAUSES

Contract Clause	Equipment Type	PT&I Technology
2, 4, 7, 8	Pump	Vibration
9	Pump	Lubricant & wear particle analysis
2, 5, 7, 8	Compressor	Vibration
9	Compressor	Lubricant & wear particle analysis
2, 6, 7, 8	Blower/fan	Vibration
9	Blower/fan	Lubricant & wear particle analysis
2, 3, 7, 8	Gearbox	Vibration
9	Gearbox	Lubricant & wear particle analysis
10	Boiler, furnace	Infrared thermography
11	Piping	Passive ultrasound
12	Piping/pressure vessel	Pulse echo ultrasound
10	Piping insulation	Infrared thermography
10	Chiller/refrigeration	Infrared thermography
9	Chiller/refrigeration	Lubricant & wear particle analysis
2, 7, 8	Chiller/refrigeration	Vibration
11	Electrical switchgear /circuit breakers	Passive ultrasound
10	Electrical switchgear /circuit breakers	Infrared thermography
15	Electrical switchgear /circuit breakers	Insulation resistance
15	Motor & motor circuit	Insulation resistance
13	Motor & motor circuit	Motor circuit analysis

Table J-C16-1. RCM Contract Clauses for Equipment Procurement Contracts

Contract Clause	Equipment Type	PT&I Technology
14	Motor & motor circuit	Motor current spectrum analysis
17	Motor & motor circuit	Start-up tests
10	Heat exchanger/condenser	Infrared thermography
11	Heat exchanger/condenser	Passive ultrasound
2, 7, 8	Electric motor	Vibration
16	Electric motor	Surge testing
2, 7, 8	Electrical generator	Vibration
13	Electrical generator	Motor circuit analysis
15	Electrical generator	Insulation resistance
10	Transformer	Infrared thermography
9	Transformer	Oil analysis
1	Measurements/surveys	NA
19	Rotating Equipment Electrical Mechanical	Equipment leveling upon installation

Table J-C16-1. RCM Contract Clauses for Equipment Procurement Contracts (cont'd)

1. MEASUREMENTS AND MEASUREMENT DATA

When measurements or surveys are required by a contract clause, the Contractor shall furnish to the procuring organization the following information concerning the equipment used to make the specified measurements:

a. List of all test equipment used including manufacturer, model number, serial number, calibration date, certificate of calibration, and special personnel qualifications required.

b. If the Contractor uses an equivalent test or procedure to meet the requirements of the contract specification, the Contractor shall provide to the procuring organization proof of equivalency.

2. BEARING INFORMATION

a. The Contractor shall provide to the procuring organization section drawings that show the component arrangement for all rotating equipment supplied under the contract. The

section drawings shall accurately depict the bearing support structural arrangement, be drawn to scale, and show the dimensions to the center line of all rotating shafts.

b. The Contractor shall provide to the procuring organization the bearing manufacturer, part number, and National Stock Number for all bearings used in all rotating equipment supplied under this contract. The information shall be included on the sectional drawings for each bearing location.

c. The required equipment data the Contractor shall provide to the procuring organization under this contract shall include the operating speed for constant speed units and the normal operating speed range for variable speed equipment.

3. GEARBOX INFORMATION

The Contractor shall provide to the procuring organization the type and number of teeth on each gear used in the gearbox and the input and output speeds and gear ratios. This information shall be included on the sectional drawings which must be to scale and be specific to gear location.

4. PUMPS

The Contractor shall provide to the procuring organization the following information on all pumps supplied under the contract:

- Number of pump stages
- Number of pump vanes per stage
- Number of gear teeth for each pump gear
- Type of impeller or gear(s)
- Rotating speed
- Number of volutes
- Number of diffuser vanes

5. CENTRIFUGAL COMPRESSORS

The Contractor shall provide to the procuring organization the following information on all centrifugal compressors supplied under the contract:

- Number of compressor sections
- Number of blades per section
- Number of diffusers
- Number of vanes per diffuser
- Number of gear teeth on drive gear
- Number of driven shafts
- Number of gear teeth per driven shaft
- Rotating speed of each rotor

6. FANS

The Contractor shall provide to the procuring organization the following information on all fans supplied under the contract:

- Type of fan or blower
- Number of rotating fan blades/vanes
- Number of stationary fan blades/vanes
- Rotating speed(s)

The Contractor shall provide to the procuring organization the following additional information if the fans/air handlers are belt driven:

- Number of belts and lengths
- Diameter of the drive sheave at the drive pitch line
- Diameter of the driven sheave at the drive pitch line

For all fans supplied under the contract, the Contractor shall ensure sufficient access to the fan is present to allow for cleaning and in-place balancing of the fan.

7. VIBRATION MONITORING

The Contractor shall provide to the procuring organization the following information for all equipment where a vibration specification is included in the contract.

7.1 Instrumentation And Sensors.

The Contractor shall use the type of instrumentation and sensors specified. For example, for a 3,600 RPM machine, an accelerometer with a sensitivity of 100 mV/g and a resonant frequency of at least 15,000 Hz is required. A rare earth super magnet and a sound disc shall be used in conjunction with any vibration data collector which has the characteristics listed:

- A minimum of 400 lines of resolution.
- A dynamic range greater than 70 dB.
- A frequency response range of 5Hz-10kHz (300-600,000 cpm).
- The capability to perform ensemble averaging.
- The use of a scanning window.
- Autoranging.

7.2 Vibration Data.

The Contractor shall provide narrowband spectral vibration data for all machines as follows:

- For machines operating at or below 1,800 RPM, the frequency spectrum provided shall be in the range of 5 to 2,500 Hz.
- For machines operating greater than 1,800 RPM, the frequency spectrum provided shall be in the range of 5 to 5,000 Hz.
- Two narrowband spectra for each point shall be obtained in the following manner:

a. For all machines regardless of operating speed, a 5 to 500 Hz spectrum with 400 lines of resolution shall be used to analyze balance, alignment, and electrical line frequency faults.

b. An additional spectrum of 5 to 2,500 or 5 to 5,000 Hz shall be acquired for machines operating at or below 1800 RPM or greater than 1,800 RPM, respectively. This higher frequency range allows early detection of rolling element bearing, gear rotor and stator problems.

c. The Contractor shall report vibration data in velocity (inches/second). If proximity probes are installed, the Contractor shall acquire and analyze vibration and phase data.

d. The Contractor shall ensure that the equipment provided meets the following acceptable vibration amplitudes for each machine:

1. Developing Vibration Criteria. Specific vibration criteria are provided for various equipment types. Where specific criteria are not provided the following procedure is to be used in developing vibration criteria:

a. Obtain nameplate data.
b. Obtain vibration spectra on similar machines. Differences in baseplate stiffness and mass will affect the vibration signature.
c. Calculate all forcing frequencies, i.e., imbalance, misalignment, bearing defect, impeller and/or vane, electrical, gear, belt, etc.
d. Construct a mean vibration signature for the similar machines.
e. Compare this mean vibration signature to the specifications and guidelines provided in this guide.
f. Note any deviations from the guidelines and determine if the unknown frequencies are system related; e.g., a resonance frequency from piping supports.
g. Collect vibration data on the new component at the recommended positions.
h. Compare the vibration spectrum with the mean spectrum determined in step d. above as well as with the criteria and guidelines provided in this guide.
i. Any new piece of equipment should have a vibration spectrum that is no worse than a similar unit of equipment operating satisfactorily.

2. Vibration Analysis of New Equipment. For all large or critical pieces of equipment assembled and run at the factory prior to shipment, a narrowband vibration spectrum should be acquired at the locations listed in clause 8 below while the equipment is undergoing this factory performance testing. A baseline or reference spectrum shall be retained for comparison with the post-installation vibration check. Equipment failing the vibration criteria shall be rejected prior to shipment.

Vibration tests are recommended under the following situations shall be performed if the equipment fails the initial test and/or if problems are encountered following installation:

- Motor cold and uncoupled.

- Motor hot and uncoupled.
- Motor and machine coupled, unloaded and cold.
- Motor and machine coupled, unloaded and hot.
- Motor and machine coupled, loaded and cold.
- Motor and machine coupled, loaded and hot.

A significant change in the vibration signature could indicate a problem with thermal distortion and/or bearing overloading due to failure of one of the bearings to float.

3. Vibration Criteria for Electric Motors

a. General. All motor vibration spectra shall be analyzed at the following forcing frequencies:

- One times running speed (1X) for imbalance.
- Two times running speed (2X) for misalignment.
- Multiples of running speed (NX) for looseness, resonance, plain bearing defects.
- Electric line frequency and harmonics (60 or 120 Hz for AC motors) for stator and rotor problems.
- The following is a list of rolling element bearing frequencies:

  — Outer race defect frequency
  — Inner race defect frequency
  — Ball defect (ball spin frequency)
  — Fundamental train frequency

- Plain or journal bearings indicate faults at harmonics of running speed and at the frequency corresponding to 0.4 - 0.5 of running speed.
- Other sources of vibration in motors are dependent on the number of motor rotor bars and stator slots, the number of cooling fan blades, the number of commutator bars and brushes, and on the SCR firing frequencies for variable speed motors.
- Broken rotor bars will often produce sidebands spaced at two times the slip frequency. The presence of broken rotor bars can be confirmed through the use of electrical testing.

b. Balance. The vibration criteria listed in Table C16-2-a. below are for the vibration amplitude at the fundamental rotational frequency or one times running speed (1X). This is a narrowband limit. An overall reading is not acceptable.

Motor Speed (RPM)	Maximum Vibration (in/sec, Peak)	Maximum Displacement (mils, Peak-to-Peak)
900	0.02	0.425
1200	0.026	0.425
1800	0.04	0.425
3600	0.04	0.212

Table C16-2-a. Motor Balance Specifications

c. Additional Vibration Criteria. All testing shall be conducted at normal operating speed under full load conditions. Suggested motor vibration criteria are provided in Table C16-2-b.

Frequency (X RPM) Motor Component	Maximum Amplitude (in/sec Peak)
0.4 - 0.5	Not detectable
1X	See Motor Balance Specifications
2X	0.02
Harmonics (NX)	Not detectable
Roller Element Bearings	Not detectable
Side Bands	Not detectable
Rotor Bar/Stator Slot	Not detectable
Line Frequency (60 Hz)	Not detectable
2X Line Frequency (120 Hz)	0.02

Table C16-2-b. Motor Vibration Criteria

4. Rewound Electric Motors. Due to the potential of both rotor and/or stator damage incurred during the motor rewinding process (usually resulting from the bake-out of the old insulation and subsequent distortion of the pole pieces) a rewound electrical motor shall be checked both electrically and mechanically. The mechanical check consists of post-overhaul vibration measurements at the same location as for new motors. The vibration level at each measurement point shall not exceed the reference spectrum for that motor by more than 10%. In addition, vibration amplitudes associated with electrical faults such as slip, rotor bar, and stator slot shall be noted for any deviation from the reference spectrum.

NOTE: Rewinding a motor will not correct problems associated with thermal distortion of the iron.

5. General Equipment Vibration Standards

   a. If rolling element bearings are used in either the driver or driven component of a unit of equipment (e.g., a pump/motor combination), no discrete bearing frequencies shall be detectable. If a discrete bearing frequency is detected, the equipment shall be deemed unacceptable.

   b. For belt-driven equipment, belt rotational frequency and harmonics shall be undetectable. If belt rotation and/or harmonics are detectable, the equipment shall be considered unacceptable.

   c. If no specific criteria are available, the ISO 3945 acceptance Class A guidelines shall be combined with the motor criteria contained in Table 7.2-b. above and used as the acceptance specification for procurement and overhaul.

6. Specific Equipment. Use the criteria shown in Table C16-2-c below on boiler feedwater, split case, and progressive cavity pumps:

Frequency Band	Maximum Vibration Amplitude (in/sec Peak)
Overall (10-1000 Hz)	0.06
1X RPM	0.05
2X RPM	0.02
Harmonics	0.01
Bearing Defect	Not detectable

Table C16-2-c. Pump Vibration Limits

7. Belt Driven Fans. Use the criteria in Table C16-2-d below for belt-driven fans:

Frequency Band	Maximum Vibration Amplitude (in/sec Peak)
Overall (10-1000 Hz)	0.15
1X RPM	0.10
2X RPM	0.04
Harmonics	0.03
Belt Frequency	Not detectable
Bearing Defect	Not detectable

Table C16-2-d Belt-Driven Fan Vibration Limits

Ranges of Radial Vibration Severity			Quality Judgment for Separate Machine Class			
Range	RMS Velocity in 10-1000 Hz at the Range Limits mm/sec	in/sec	Class I	Class II	Class III	Class IV
0.28	0.28	0.011	A	A	A	A
0.45	0.45	0.018	A	A	A	A
0.71	0.71	0.028	A	A	A	A
1.12	1.12	0.044	B	A	A	A
1.80	1.80	0.071	B	B	A	A
2.80	2.80	0.110	C	B	B	A
4.50	4.50	0.180	C	C	B	B
7.10	7.10	0.280	D	C	C	B
11.20	11.20	0.440	D	D	C	C
18	18	0.710	D	D	D	C
28	28	1.10	D	D	D	D
71	71	2.80	D	D	D	D

Table C16-2-e. ISO 3945 Vibration Severity Table.

8. Vibration Guidelines (ISO). Table C16-2-e is based on International Standards ISO 3945 and shall be used as a guideline (not as an absolute limit) for determining the acceptability of a machine for service. The vibration acceptance classes and ISO 3945 machine classes are shown in Tables C16-2-f and C16-2-g respectively. Note that the ISO amplitude values are overall measurements in inches/second RMS while the recommended specifications for electric motors are *narrowband measurements* in inches/second Peak.

Class	Condition
A	GOOD
B	SATISFACTORY
C	UNSATISFACTORY
D	UNACCEPTABLE

Table C16-2-f Vibration Acceptance Classes

Machine Classes for ISO 3945	
Class I	Small size machines to 20 HP
Class II	Medium size machines (20-100 HP)
Class III	Large machines (600-12,000 RPM) 400 HP and Greater Rigid mounting
Class IV	Large machines (600-12,000 RPM) 400 HP and Greater Flexible mounting

Table C16-2-g Machine Classifications.

e. The Contractor shall collect vibration data at normal operating load, temperature, and speed.

f. The Contractor shall supply all critical speed calculations. In addition, the Contractor shall perform a check for machine resonance following installation and correlated with all known forcing frequencies; i.e., running speed, bearing, gear, impeller frequencies, etc.

g. The Contractor shall analyze all motor vibration spectra at the following forcing frequencies and provide the results to the procuring agency:

- One times running speed (1X) for imbalance.
- Two times running speed (2X) for misalignment.
- Multiples of running speed (NX) for looseness, resonance, and plain bearing defects.
- Electric line frequency and harmonics (60 or 120 Hz for AC motors) for stator and rotor problems.
- Roller element bearing frequencies, when present.

8. VIBRATION MONITORING DISCS/LOCATIONS

a. For all rotating equipment provided under the contract, the Contractor shall install vibration monitoring discs using the following guidelines:

1. Sound discs shall be a minimum of 1" in diameter, manufactured of a magnetic material, have a surface finish of 32 micro-inches RMS, and be attached by welding or stud mounting. The Contractor has the option of machining the equipment case in order to achieve a flat and smooth spot which meets the same tolerances as the sound disc if the equipment case is manufactured from a magnetic material.

2. The Contractor shall ensure monitoring locations are positioned on structural members. Installation of sound discs on bolted cover plates or other non-rigid members is not acceptable.

b. Centrifugal Pumps, Vertically Mounted. Sound discs shall be mounted in the radial direction as close to the bearings as possible. Accelerometers shall be mounted to solid structures and not on drip shields or other flexible structures. Mounting locations shall be in line with each other, perpendicular to the pump discharge, and located at the free end, at the coupled end of the motor and pump, and in the axial direction on the pump and motor, if possible.

c. Centrifugal Pumps, Horizontally Mounted. Sound discs shall be mounted in the horizontal and vertical planes radial to the shaft at the free and coupled ends of the motor and pump as close to the bearings as possible. Accelerometers shall be mounted to solid structures and not on drip shields or other flexible structures. Mounting locations shall be in line with each other, perpendicular to the pump discharge and located at the free and coupled end of the motor and pump, and in the axial direction on the motor and pump, if possible.

d. Positive Displacement Pumps. Sound discs shall be mounted in the horizontal and vertical planes radial to the shaft at the free and coupled ends of the motor and pump as close to the bearings as possible. Accelerometers shall be mounted to solid structures and not on drip shields or other flexible structures. Mounting locations shall be in line with each other, perpendicular to the pump discharge, and located at the free end, coupled end of the motor and pump, and in the axial direction on the pump and motor. An exception may be granted if the pump is sump mounted.

e. Generators. The Contractor shall install sound discs in the horizontal and vertical planes on the free ends of the motor and generator bearing assemblies. Pedestal

bearings between the motor and generator should be monitored in the vertical direction radial to the shaft. Thrust bearings shall be monitored in the axial direction.

f. Gear Boxes . The Contractor shall install sound discs radial to the input and output shafts in the horizontal and vertical directions. Additional discs shall be installed in the axial direction as close to the input and output shafts as possible.

g. Compressors. The Contractor shall install sound discs radial to the input and output shafts in the horizontal and vertical directions. Additional discs shall be installed in the axial direction as close to the input and output shafts as possible.

Centrifugal compressors may be monitored effectively in this manner. However, reciprocating air compressors shall only be monitored for balance and alignment problems.

h. Blowers & Fans. Motors on blowers and fans shall have sound discs installed in the radial and axial directions as previously described. Fan bearings shall be monitored radially in the vertical direction.

i. Chillers

1. Centrifugal. The Contractor shall mount sound discs in the horizontal and vertical planes radial to the shaft at the free and coupled ends of the motor and compressor as close to the bearings as possible. Accelerometers shall be mounted to solid structures and not on drip shields or other flexible structures. Mounting locations shall be in line with each other, perpendicular to the compressor discharge, and located at the free end, at the coupled end of the motor and compressor, and in the axial direction on compressor and motor.

2. Reciprocating. The Contractor shall install sound discs radial to the input and output shafts in the horizontal and vertical directions. Additional discs shall be installed in the axial direction as close to the input and output shafts as possible.

9. LUBRICANT AND WEAR PARTICLE ANALYSIS

The Contractor shall provide to the procuring organization the following information on all lubricants supplied in bulk or contained within equipment supplied under this contract:

a. Liquid Lubricants

1. Viscosity. Viscosity grade in ISO units
AGMA and/or SAE classification as applicable

Viscosity in Saybolt Universal Seconds (SUS) or centipoise at the standard temperature and at designed normal operating temperature. The following formula should be used to calculate SUS and absolute viscosity:

$Z=p_t(0.22s-180/s)$

where: Z = absolute viscosity in centipoise at test temperature
s = Saybolt Universal Seconds
p_t = specific gravity at test temperature
t = temperature (°F)

2. Density. Changes in density can be calculated by the formula:

$p_t=p_r-0.00035(t-60)$

where: p_r = specific gravity at the reference temperature (normally 60°F)
t = temperature (°F)

b. Grease Lubricants

- NLGI Number
- Type and percent of thickener
- Dropping point
- Base oil viscosity range in SUS or centipoise

1. Viscosity. The following formula shall be used to calculate SUS and absolute viscosity:

$Z=p_t(0.22s-180/s)$

where: Z = absolute viscosity in centipoise at test temperature
s = Saybolt Universal Seconds
p_t = specific gravity at test temperature
t = temperature (°F)

2. Density. Changes in density can be calculated by the formula:

$p_t=p_r-0.00035(t-60)$

where: p_r = specific gravity at the reference temperature (normally 60° F)
t = temperature (°F)

c. Lubricant Tests. The Contractor shall perform lubricant tests listed in Table C16-3-a. on all lubricants supplied and shall submit the results of the tests .

Lubricant Tests					
Test		Testing for	Indicates	Correlates with	When used
Total Acid No. (TAN) Total Base No.		pH	Degradation, oxidation, contamination	Visual, RBOT	Routine
Rotating Bomb Oxidation Test (RBOT)		Anti-oxidants remaining	Lubricant resistance to oxidation	TAN	Periodic (long term)
Solids		Solids	Contamination or degradation	TAN, RBOT, spectro-metals	Routine and post repair
Visual for color & clarity		Cloudiness or darkening	Presence of water or particulates. Oxidation of lubricant.	TAN	Routine
SpectroIRTetals (IR spectral analysis)		Metals	Presence of contaminants, wear products and additives	Particle count	Routine
Particle count		Particles >10 µm	Metal & wear product particles	Spectro-metals	Routine
Ferro-graphy	Direct	Ferrous particles up to 250 µm	Wear rate	Particle count, spectro-metals	Case basis
	Analyt-ical	Ferrous particles	Microscopic examination. Diagnostic tool.	Particle count, spectro-metals	Case basis
Micropatch		Particles, debris	Microscopic examination. Diagnostic tool	Particle count, spectro-metals, ferrography	Periodic or case basis
Water Content		Water	Degradation, leak, oxidation, emulsion	Visual, RBOT	Routine
Viscosity		Lubricating quality	Contamination, degradation	Water	Routine

Table C16-3-a. Lubricant Tests

d. Hydraulic Fluids. All bulk and equipment-installed hydraulic fluids supplied under this contract shall meet the cleanliness guidelines in Table C16-3-b. The procuring organization will specify System Sensitivity. In Table C16-3-b, the numbers in the 5 micron and 15 micron columns are the number of particles greater than 5 microns and 15 microns in a 100-milliliter sample.

The particle counting technique utilized shall be quantitative. Patch test results are not acceptable.

Type of System	System Sensitivity	Suggested Maximum Particle Level (Particles per 100 milliliters)		
		5 microns	15 micron	ISO
Silt sensitive control system with very high reliability. Laboratory or aerospace	Super critical	4,000	250	13/9
High performance servo and high pressure long life systems. Machine tools	Critical	16,000	1,000	15/11
High quality reliable systems. General machine requirements	Very Important	32,000	4,000	16/13
General machinery and mobile systems. Med. pressure & capacity	Important	130,000	8,000	18/14
Low pressure heavy industrial systems. Long life not critical.	Average	250,000	16,000	19/15
Low pressure systems with large clearances	Main protection	1,000,000	64,000	21/17

Table C16-3-b. Sperry Vickers Table of Suggested Acceptable Contamination Levels for Various Hydraulic Systems

The ISO numbers in the right-hand column of Table C16-3-b are based on the concentration of particles greater than 5 microns and greater than 15 microns per 100-milliliter sample. The concentration can then be converted to the ISO number using an ISO Range Number Table available from hydraulic fluid vendors or lubrication laboratories.

e. Insulating Fluids. The Contractor shall identify the type of oil used as an insulating fluid for all oil-filled transformers supplied under the contract. In addition, the Contractor shall test the insulating oil using the American Society for Testing Materials (ASTM) test listed in Table C16-3-c and provide the results . Any deviation from the typical properties listed below shall be corrected by the Contractor before the transformer will be accepted.

TEST (Units)	SILICONE	MINERAL	ASKAREL
Dielectric Breakdown ASTM D877 (KV)	30+	30+	30+
Power Factor ASTM D924 (%)	0.01	0.05 max	0.05
Neutralization Number ASTM D974 (mg KOH/g)	<0.03	<0.03	<0.03
Interfacial Tension ASTM D2285 (dynes/cm)	NA	35 min	NA
Specific Gravity ASTM 1298	0.96	0.88	1.55
Flash Point ASTM D92 (C)	>305	160	NA
Fire Point ASTM D92 (C)	360	177	None to Boiling
Pour Point ASTM D97 (C)	-55	-51 max	-30 max
Water Content ASTM D1533 (ppm)	30 max	30 max	30 max
Viscosity @ 40C ASTM D445 (SUS)	232	57.9	55.8-61.0
Color & Appearance	clear/water like	pale yellow clear	pale yellow clear

Table C16-3-c. Typical Properties of Transformer Oils

f. Sampling Points. The Contractor shall install sampling points and lines in accordance with Method No.1 as recommended by the National Fluid Power Association (NFPA). Method No. 1 is published as NFPA T2.9.1-1972 titled *Method for Extracting Fluid Samples from the Lines of an Operating Hydraulic Fluid Power System for Particulate Particle Contamination Analysis* as follows:

1. For Pressurized Systems. A ball valve is placed in the fully opened position with a downstream capillary tube (ID> 1.25 mm) of sufficient length to reduce down-stream pressure and control flow in the desired range. The sampling point shall be located in a turbulent flow region and upstream of any filters.

2. For Reservoirs and Non-Pressurized Systems. A 1/8" stainless steel line and ball valve is placed in the side of the oil sump or tank. The line shall be located as close to the midpoint of the structure as feasible. In addition, the sample line shall extend internally to as close to the center of the tank as possible.

10. THERMOGRAPHY

a. Electrical. The Contractor shall perform a thermographic survey on all electrical distribution equipment, motor control centers, and transformers during the start-up phase of the installation unless the thermographic survey is waived by the procuring agency.

Any defects noted by an observable difference in temperature of surveyed components or unexplained temperature rise above ambient shall be corrected by the Contractor at no additional expense to the procuring agency. The Contractor shall resurvey repaired areas to assure proper corrective action has been taken.

b. Piping Insulation. The Contractor shall perform a thermographic survey on all insulated piping during the start-up phase of the installation unless the thermographic survey is waived by the procuring agency.

Any voids in the piping insulation shall be corrected by the Contractor at no additional cost to the procuring agency. The Contractor shall resurvey repaired areas to assure proper corrective action has been taken.

c. Building Envelope. The Contractor shall perform a thermographic survey of the building envelope as part of the pre-beneficial occupancy to check for voids in insulation and/or the presence of wetted insulation. In addition, the presence of air gaps in building joints such as seams, door frames, window frames, etc., shall be checked via thermographic survey using an appropriate procedure and specifications described in the following:

- ASTM C1060-90 *Thermographic Inspection of Insulation in Envelope Cavities In Wood Frame Buildings.*
- ASTM C1153-90 *Standard Practice for the Location of Wet Insulation in Roofing Systems Using Infrared Imaging.*
- ISO 6781 *Thermal Insulation-Qualitative Detection of Thermal Irregularities in Building Envelopes-Infrared Method.*
- ASTM E1186-87 *Standard Practices for Air Leakage Site Detection in Buildings.*

The Contractor shall clearly identify all voids or gaps noted during the thermographic scan by photographs, scale drawings, and/or by description.

For areas where the moisture content of the insulation or building envelope is questionable, the Contractor shall use either destructive or non-destructive testing techniques that confirm the amount of moisture. Specific testing procedures to be used shall be proposed by the Contractor and approved by the procuring agency.

d. Boilers, Furnaces, and Ovens. The Contractor shall perform a thermographic survey during the start-up phase of installation of all furnaces, boilers, and ovens as a means of determining voids in insulation or refractory materials. Any voids detected during the survey shall be corrected by the Contractor at no expense to the procuring agency.

The Contractor shall perform a thermographic survey of all repaired areas prior to final acceptance by the procuring agency.

11. AIRBORNE ULTRASONICS

The Contractor shall perform an airborne ultrasonic survey during the start-up phase of the installation unless the airborne ultrasonic survey is waived. The Contractor shall survey electrical equipment for indications of arcing or electrical discharge, including corona. Piping systems shall be surveyed for indications of leakage.

Any defects or exceptions noted by the use of airborne ultrasonics shall be corrected by the Contractor at no additional expense to the procuring agency. The Contractor shall re-survey repaired areas to assure proper corrective action has been taken.

12. PULSE ECHO ULTRASONICS

The Contractor shall perform material thickness measurements on a representative sample of all material where a thickness is specified in the contract. Thickness measurements shall be performed at the fabricator's place of business prior to shipment of any material to the project site. Material that does not meet the specified requirements of the contract shall not be shipped without the prior approval of the procuring agency.

13. MOTOR CIRCUIT ANALYSIS (COMPLEX PHASE IMPEDANCE)

Upon motor installation, the Contractor shall take and provide to the procuring organization the following acceptance/baseline readings and measurements, first for the motor alone, and then, for motor and circuit together:

- Conductor path resistance
- Inductive imbalance
- Capacitance to ground

14. MOTOR CURRENT SPECTRUM ANALYSIS

With the motor installed and operational, the Contractor shall conduct an acceptance/baseline spectral analysis on the loaded motor at 75% or greater load when specified by the procuring agency.

15. INSULATION RESISTANCE

Upon installation, the Contractor shall take and provide to the procuring organization the following acceptance/baseline readings and measurements; first, for the circuit or for the motor alone, and then, for motor and circuit together:

- Polarization Index (Motors of 500 HP or more only)
- Dielectric Absorption Ratio (for all motors)
- Leakage current at test voltage

16. SURGE TESTING

The Contractor shall perform surge testing and high potential (high-pot) resistance testing of the motor(s) prior to their installation and procuring organization acceptance. The Contractor shall provide documentation of test results, including test voltage, waveforms, and high potential leakage current.

17. START-UP TESTS

With the motor installed and operational, the Contractor shall collect and provide to the procuring organization the following baseline data:

- Coast-down time
- Peak starting current

18. MAINTAINABILITY AND EASE OF MONITORING

The Contractor shall provide for facility and equipment maintainability and ease of monitoring through design. The Contractor shall provide documentation to illustrate and support the maintainability and ease of monitoring incorporated by the design.

19. LEVELING OF EQUIPMENT UPON INSTALLATION

The Contractor shall level all installed rotating electrical and mechanical machinery. After installation, the equipment shall not exceed a maximum slope of the base and the frame of 0.001 inch per foot. The Contractor shall report to the procuring organization the type and accuracy of the instrument used for measuring the level; e.g., a 12-inch machinist's level graduated to 0.0002 inch per foot.

END OF SECTION J

GUIDE OUTCOME MONITORING PLAN

I. Concept: The objective of outcome monitoring is to gauge the effectiveness of the Contractor's work without resorting to intense work performance monitoring. It is a process of tracking key indicators that are expected to result, in part, from good performance by the Contractor. Poor outcome results are to be used to prompt the Contractor to identify root causes of problems and correct them. Unlike contracting for work tasks or outputs where there is a schedule of deductions for unsatisfactory work, the outcome specification contracts for results directly, and there is no practical pricing or deduction method when outcomes are not achieved. Instead, the Center/Installation will use the outcome results as a major factor in award fee decisions. This guide Outcome Monitoring Plan supplements the NASA Outcome Specification Guide and is intended to serve as a template for developing the procedures involved in adapting the outcome monitoring concept to NASA Center/Installation COSS functions. It is also intended to apply to the functions contained in the Guide COSS Output Statement of Work. The procedures, analyses and action steps discussed below are common to each outcome plan. What is unique to each function are the outcomes, indicators and standards which are to be monitored. Recommendations for these elements are provided in this Outcome Guide. For the functions contained in the guide SOO, the following outcome categories to be monitored are suggested:

1. Management Services
2. Engineering Services
3. Energy Management
4. Environmental Support Services
5. Buildings and Structures O, M&R (Includes Pest Control, Marine Structures, Built-in Cranes and Surfaced areas)
6. Utilities Systems O, M&R
7. Grounds Care Services
8. Refuse Collection and Disposal Services
9. Custodial Services
10. Security Services
11. Supply/Transportation Services

A Performance Monitoring Plan is suggested for IDIQ work

II. Procedures. The following process is suggested to develop outcome-monitoring procedures for the above categories.

A. Identify contract requirements in outcome terms, indicators and standards.

The Contract requirements are the out*comes* specified in the SOO. They are similar to the traditional out*put* requirements found in the Performance Requirements Summary (PRS) Tables. The outcome is the desired result of performing the function well, and the indicator is the quantifiable measure of the success of the outcome. The standard, which normally should reflect historical baseline data, is the required numerical value for the indicator; i.e., the degree to which the outcome is achieved, such as "meeting 99% equipment availability". The Contractor's SOW is expected to achieve the same or better outcomes that have been experienced in the past. In the event past data is not available to construct a baseline, the QAE must establish a subjective one based on technical experience and benchmark data from other Agencies.

The following are suggested sample outcomes for some of the 11 recommended outcome categories: Each Center/Installation may add or delete to fit the criticality of work at the Center/Installation and to fit the resources necessary to capture and analyze the data. Outcomes may also be selected by joint effort with the Contractor as part of the partnering agreement process.

SAMPLE OUTCOMES BY FUNCTIONAL CATEGORY
(From Guide Statement of Objectives – SOO)

1. Management Services

ITEM NO.	CONTRACT REQUIREMENT	INDICATOR	STANDARD
C.2.3A	Provide reliable and cost effective facilities and services at !INSERT CENTER/ INSTALLATION NAME!	a. Mission schedule b. Customer satisfaction	a. No mission schedule impact due to Contractor action or inaction. b. Customers are satisfied with reliability and cost.
C.2.3.B	Achieve flexibility and responsiveness to multiple customers with competing demands.	Customer satisfaction	Customers are satisfied with overall service priorities.
C.2.3.C	Provide cost savings to the government without adverse impact on !INSERT CENTER OR INSTALLATION! Mission performance.	Government costs	a. Direct costs for contract services are lower as a result of Contractor initiated or recommended actions b. Indirect government costs for infrastructure maintenance and operations are lower as a result of Contractor

			initiated or recommended actions.
C.2.3.D	Provide responsive planning and work control to all customers	Customer satisfaction	a. Customers are satisfied with work management system b. Management and work information systems are user friendly and provide required customer data as needed.

2. Engineering Services – Section C.5. of the Guide Outcome Specification.

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.5.2A	Engineering services fully support the mission of ! !INSERT CENTER/ INSTALLATION NAME!.	Acceptance.	Government acceptance.
C.5.2B	Real property planning and management continuously reduce both excess infrastructure quantity and unit costs.	Amount of infrastructure and cost of ownership	Decrease in both the amount of excess infrastructure and the unit cost of ownership (maintenance and repair). Declining annual trend.
C.5.2C	Facility Project Program is consistent with ! !INSERT CENTER/INSTALLATION NAME! vision, long range plans, and fiscal projections.	Acceptance	Government Acceptance
C.5.2D	All real property data, records, maps, documents, and reports are maintained or accomplished accurately and on schedule.	Accuracy and timeliness.	90% of changes posted on a continuous basis with no required change taking more than 45 calendar days to post. 97% of real property activities during a six-month period shall be completed correctly the first time.
C.5.2E	Designs and cost estimates meet acquisition cost targets and are completed in accordance with program schedule.	Accuracy and timeliness.	Engineering design cost estimates accurate to 90% of actual acquisition costs. Engineering design completion rate 98% of program schedule.
C.5.2F	Construction accomplished on schedule and within awarded costs.	Timeliness and cost control.	Schedule and cost growth within 2% and 5% of awarded schedule and price respectively.

3. Energy Management Services - Section C.6 of the Guide Outcome Specification.

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.6.2.2A	Energy and water consumption to generate and deliver utilities service is reduced	Energy and water consumption	Annual decrease from baseline year (adjusted for additional commodity demand).
C.6.2.2B	Reduce end-use utility consumption by customers	Utility commodity consumption	Annual decrease from baseline year (adjusted for additional consumers).

4. Environmental Services. - Section C.7 of the Guide Outcome Specification.

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.7.2.2A	! INSERT CENTER/ INSTALLATION NAME! operations are in compliance with federal, state, and local environmental laws and regulations.	Statutory and regulatory deficiencies	No notices of violation or other deficiencies
C.7.2.2B	Environmental services supports achievement of the !NAME! mission.	a. Mission program scopes, budgets and schedules b. Customer satisfaction	Mission programs are not adversely affected by environmental matters that could have been avoided or anticipated from contractor actions
C.7.2.2C	Environmental reports, permits and other regulatory documents, including NEPA documentation, are prepared as negotiated to meet customer needs.	a. Timeliness b. Quality c. Customer satisfaction	a. Meet negotiated schedule b. No more than one rework in six month period c. Mutually agreed customer requirement is achieved
C.7.2.2D	Hazardous and controlled waste operations satisfy customer requirements.	Customer satisfaction	Mutually agreed customer requirements are met
C.7.2.2E	Spill and release response and emergency containment and cleanup are timely and effective.	a. Timeliness b. Effectiveness	a. Response is within Operations Plan criteria b. Operations plan procedures are followed; actions meet expectations of industry and regulatory experts for similar situations

5. Buildings and Structures O, M&R – Section C.8 of the Guide Outcome Specification

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.8.2.2.A	Buildings, structures and systems are available and functional when needed.	a. Incidents of non-availability or reduced functionality b. Number of failures and malfunctions c. Customer feedback	a. 100% availability and functionality for critical facilities b. Number does not exceed historical data c. No more than !INSERT NUMBER – suggest use an assessment of historic data and judgement based on overall size of center/Installation, number of buildings, systems, users, etc. A higher standard increases costs! substantiated customer complaints. !THIS STANDARD WILL BE THE PRINCIPAL EVALUATION FOR NON_CRITICAL FACILITIES!
C.8.2.2.B	Operation, maintenance and repair are affordable	a. Costs of :major repair b. Utilities consumption c. Customer input	c. Declining cost trend for major repair d. Declining consumption trend for utilities e. Customers are satisfied that costs are reasonable
C.8.2.2.C	Minimize impact on operations from trouble call problems	Customer feedback	No more than !INSERT NUMBER! substantiated customer complaints concerning response time or effectiveness.

6. Utilities Systems O, M&R – Section C.9 of the Guide Outcome Specification

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.9.2.2.A	Operate the electrical distribution and emergency generation systems within their rated capacities to continuously deliver stable electric power to all connected loads and assure !INSERT CENTER/ INSTALLATION NAME! is provided a steady, fault-free power supply.	Production deficiencies.	a. No mission delays due to electric power deficiencies b. No more than two unscheduled outages per year and none last longer than two hours. c. No emergency system failures.
C.9.2.2.B	Operate the central heating plant and associated distribution systems, facilities, and equipment to assure the availability of !INSERT STEAM OR HIGH TEMPERATURE HOT WATER (HTHW)! to the !INSERT CENTER/ INSTALLATION NAME!.	Production deficiencies	No more than two unscheduled outages per year and none last longer than two hours.
C.9.2.2.C	Operate the wastewater collection systems, pumping stations, and treatment facilities in accordance with applicable health standards to provide continuous, cost effective, and efficient collection, conveyance and treatment of all wastewater generated at !INSERT CENTER OR INSTALLATION!.	Production deficiencies	a. No more than two unscheduled outages per year and none last longer than two hours. b. No health or environmental violations.
C.9.2.2.D	Operate the water system to produce sufficient potable water to meet demand up to a maximum of !INSERT NUMBER! gallons per !INSERT TIME! and industrial water to meet demand up to a maximum of !INSERT NUMBER! gallons per !INSERT TIME! with quality required by all federal, state and local agencies.	Production deficiencies	a. No Quality or Quantity deficiencies b. No health or environmental violations.

C.9.2.2.E	Maintain and repair all utility systems to maximize availability, reliability, and longevity needs of the !INSERT CENTER OR INSTALLATION!. and all customers.	Outages due to maintenance and repair related failure.	No more than one per year for each system
C.9.2.2.F	Read all electric !ADD OTHERS IF APPLICABLE! meters on a regular !INSERT FREQUENCY! schedule and bill customers for electric consumption in compliance with established schedule if billing is done at Center/Installation.	a. Accuracy b. Timeliness.	a. Accuracy 99.9% b. Timeliness 100%

7. Roads and Surfaced Areas. - Section C.10 of the Outcome Specification Guide.

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.10.2.2A	Roads, airfield pavements, and other surfaced areas are available, fully functional, and meet the operational requirements of the Center/Installation	a. Complaints b. Incidents of reduced or non availability or functionality c. Cost, time or other measure of availability and functionality incidents	a. Valid complaints per month are less than baseline data b. Number of incidents do not exceed baseline c. No adverse affects on mission critical activities
C10.2.2B	Roads, airfield pavements, and other surfaced areas are safe and hazard free.	a. Accidents b. Property damage incidents	a. No accidents related to condition of pavements and surfaced areas or action/inaction of Contractor b. No incidents of property damage related to condition of pavements and surfaced areas or action/inaction of Contractor
C.10.2.2C	Maintenance and repair of roads, airfield pavements, and other surfaced areas are affordable	Cost of major repairs	Declining cost trend for major repair .

8. Grounds Care. Section C.11 of the Outcome Specification Guide.

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.11.2.2A	Grounds present a uniformly pleasing and functional appearance appropriate to the use and the type of vegetation and commensurate with the overall Center/Installation objective to contain support services cost	a. Appearance b. Center/ Installation personnel and visitor input	a. Comparable to or exceeds appearance of similar government and commercial facilities b. Center/Installation personnel and visitors have 95% favorable observations; no more than !INSERT NUMBER! valid complaints per quarter.
C.11.2.2B	Long-term health of vegetation is maintained or improved without significant replacement or alteration costs.	a. Incidents of vegetation disease and/or deterioration b. Costs of vegetation replacement or landscaping alterations	a. No incidents of preventable disease or deterioration b. No costs for vegetation replacement or alteration that are not justified as cost effective
C.11.2.2C	Maintain accessible and safe roads, parking areas, sidewalks, steps, and building entrances for required operations, safety and fire protection during periods of ice and snow.	a. Incidents of disruption to Center/ Installation operations b. Accidents during periods of snow and ice	a. No operational disruptions b. Accident rate during snow and ice periods does not exceed baseline; no accidents attributed to Contractor action or inaction regarding snow removal

9. Refuse Collection and Disposal. Section C.12 of the Outcome Specification Guide.

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.12.2.2A	Solid waste collection and disposal operations ensure sanitary and healthful conditions and conform to all federal and local laws, statutes, and regulations	Customer input	No more than !INSERT NUMBER! substantiated unsatisfactory incidents per month
C.12.2.2.B	Solid waste containers are available continuously to support mission and operational needs for solid waste removal.	Customer input	No more than !INSERT NUMBER! substantiated unsatisfactory incidents per month
C.12.2..2C	Recycling program complies with law, regulation and policy.	Number of non-conformances.	No more than !INSERT NUMBER! of non-conformances per month

10. Custodial Services. Section C.13 of the Outcome Specification Guide.

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.13.2.2A	Building spaces are clean and sanitary, and provide a pleasing environment for Center/ Installation workers and visitors.	a. Occupant input b. Comparability survey of similar professional offices and research facilities.	a. Occupant survey satisfaction ratings equal or exceed baseline data; no more than !INSERT NUMBER! of substantiated complaints per month !SUGGEST BASE ON HISTORICAL DATA!
C.13.2.2B	Custodial services meet needs of Center/Installation operations.	Incidents of operational delay and interference	No validated incidents attributable to Contractor
C.13.2.2C	Space Cleaning: * Floors and carpets are free of dirt and debris * Waste containers are useable and odor free. * All Surfaces are free of dust * Exterior spaces are free of dirt and debris	Number of complaints	Number of valid complaints per month does not exceed baseline data.
C.13.2.2D	Floor Cleaning: * All surface areas are free of dirt and debris.	Number of complaints	Number of valid complaints per month does not exceed baseline data.

	* Non-carpeted floors have uniform gloss finish. * Entrances are protected by walk off mats		
C.13.2.2E	Restroom Servicing: * Supplies are available * Floors are free of dirt and debris * Waste containers are usable and odor free. * All surfaces and fixtures disinfected and free of stains and odors	Number of complaints	Number of valid complaints per month does not exceed baseline data.

11. Security Services. Section C.14 of the Outcome Specification Guide.

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.14.2.2A	Secure and classified resources are protected as required by law, regulation and mission needs.	Number of incidents of unauthorized access or security compromise	No incidents
C.14.2.2B	Rapid and effective response to emergency situations.	a. Timeliness of response b. Personnel injury, security compromise, time delay and dollar cost	a. IAW operations plan and reasonable in consideration of location, time of day, contract funding. b. Response actions IAW operations plan and damage or loss mitigated to extend practicable
C.14.2.2C	Access and visitor control provides positive and professional image to public, employees and contractors	Input from public, employees and contractors	No more than !INSERT NUMBER – suggest make judgement in consideration of population touched by control activities! substantiated complaints and unsatisfactory reports per month
C.14.2.2D	Accurate, efficient and courtesy badging	a. Number of incidents of inaccurate badges and badge control lapses b. Input from service users	a. No more than !INSERT NUMBER – suggest make judgement in consideration of number of badges in use and historical data on problems! substantiated incidents per month b. No more than !INSERT NUMBER – suggest make

			judgement in consideration of population receiving badging service! substantiated complaints and unsatisfactory reports per month

12. Supply and Transportation Support . Section C.15. of the Outcome Specification Guide.

ITEM NO.	CONTRACT REQUIREMENTS	INDICATOR	STANDARD
C.15.2.2A	Supplies and materials meet negotiated need date	Issue date	!90%! meet need date with none more than !3! work days late
C.15.2.2B	Supply support services meet the needs of customers	a. Schedule b. Customer input	a. !95%! schedule compliance b. No more than !INSERT NUMBER-suggest 0.1% of estimated transactions! valid customer complaints per month
C.15.2.2C	Self-service vehicles and equipment are available as scheduled and reliable to support the operational needs of users	a. Schedule b. Customer input	a. !98%! schedule compliance b. No more than !INSERT NUMBER-suggest 0.1% of estimated transactions! valid customer complaints per month
C.15.2.2D	Bus services meet customer needs	a. Schedule b. Customer input	a. Scheduled service no later than !5! minutes behind schedule; unscheduled !90%! on time and none more than !1! hour late b. No more than !INSERT PERCENTAGE of estimated passengers! valid customer complaints per month
C.15.2.2E	Delivery and hauling services meet customer needs	a. Schedule b. Customer input	c. !100%! mail schedule compliance !95%! schedule compliance for all other d. No more than !INSERT NUMBER-suggest 0.1% of estimated transactions! valid customer complaints per month

Note to Users - *If the User feels that a function is too critical to wait for an outcome indicator to show poor performance, then this outcome plan must be supplemented with performance monitoring. Refer to the NASA COSS Output Specification and Performance Monitoring Plan Guides.*

B. Build a Baseline. Once the outcomes and indicators are decided on, and prior to contract start, the QAE needs to begin building a "Baseline" of current outcome experience by tracking the outcome indicators. The purpose is to identify expected results to serve as a reference point for the new contract evaluation. In the absence of historical data, the QAE may begin tracking the data for the first time or search out other agency experience to establish at least a subjective standard that can be adjusted over time.

C. Record and Track Outcome Data. With a baseline established and the new contract started, the QAE must now have a mechanism for receiving outcome data. Since occupant satisfaction will be a major outcome for many functional areas, the Contract Management Office should establish one point of contact for all feedback (positive and negative), and educate the customers on the contract requirements and complaint procedures. Alternatively, all outcome data could be required of the CMMS Data base. The Contractor is required to maintain a database of information, some of which could be outcome result information such as equipment failures, utility outages, building occupant complaints by function, etc. At the end of each month, outcome data for all outcomes is summarized and entered into an Excel spreadsheet. A sample format is shown below for the Operation, Maintenance and Repair Category. Similar sheets can be created using the requirements tables shown above for each major function. A chart tracking the trend of some of these outcomes is shown below the spreadsheet.

Although the charts are easy to read and present a graphical picture of trends, they do take time to prepare and can be confusing if more than one indicator is put on the same chart. A simple alternative to creating charts is to use the excel spreadsheet to calculate a running average of the monthly data as an additional column on the spreadsheet as shown above. This running average changes each month and is simply the average of all the months' data to date. It is a reliable indicator to compare to the baseline. A separate Summary Spreadsheet is suggested for each major functional category. The entire outcome tracking process can be recorded on one Excel file. The running average can be programmed into excel and data entry reduced to simply the current months outcomes.

D. Analysis**.** At the end of each month the QAE will input the outcome data and compare the running averages with the baseline or threshold level and determine if there is a negative or positive trend. At the beginning of the contract the QAE should allow for a learning curve process for 2 or 3 months. The trend should show improvement after that adjustment period.

E. Summary Findings and Action**.** The QAE should print out the summary outcome spreadsheets for each functional area and provide them to the COTR for review with the Contractor.

1. Negative Findings. A negative running average which exceeds the baseline by 10% (Shown as dark shade on the spreadsheet) should be hi-lighted on the spreadsheet. The COTR will discuss these findings with the Contractor at the monthly progress meeting or sooner. Based on the recommended Partnering Agreement, the Contractor is obligated to investigate the root cause of the negative trend and correct whatever problems are causing them. If the next month's indicators show no improvement, the QAE should begin or increase Performance Monitoring and take appropriate invoice deductions until corrective measures show improvement.

2. Borderline Results. Running averages which are borderline (Shown as light on the spreadsheet) should also be discussed at the progress meeting especially if there is a negative trend line involved.

3. Positive Findings. A positive trend should also be acknowledged and may be used for Award fee purposes, if allowed as part of the contract.

In summary, the QAE evaluation effort is not designed to find defects for the purposes of deduction; rather, it is intended to obtain a fair and accurate measure of Contractor compliance with outcome specification requirements. For that reason, outcome monitoring is seen as a primary or first approach to gauge Contractor effectiveness. Where criticality of systems or equipment is an issue, performance output requirements may be added to Outcome requirements (See SOO Guide examples). If the specification includes output requirements, then the use of output monitoring is an appropriate additional tool. The bottom line is that the Government is more interested in achieving its' outcome objectives and in the Contractor taking action on areas of deficiency to prevent recurrence than it is in taking deductions.

END OF OUTCOME MONITORING PLAN

CONCEPT OF OPERATIONS (COO) GUIDE FOR NASA CENTER OPERATIONS SUPPORT SERVICES CONTRACT MANAGEMENT

CONCEPT OF OPERATIONS GUIDE FOR NASA CENTER OPERATIONS SUPPORT SERVICES CONTRACT MANAGEMENT

Table of Contents

Exhibits

Attachments

I. INTRODUCTION

A. Purpose. This guide provides a Concept of Operations in conjunction with the Center Operations and Support Services (COSS) contract development guide. The Operation Guide is provided to all key personnel involved in the administration and operation of Performance Based Center operations and Support Services contracts. It identifies key operational issues and establishes procedures and guidance for resolving them and managing the contract on a daily basis. It is designed to be used with the related Performance Based Center Operations Support Services (COSS) Contract Guide and Quality Assurance Guide. Together, they provide a road map for developing and managing a consolidated contract. The intent is that each Center/Installation will use this guide to develop its own unique operations guide and provide distribution to all contract management personnel. Your guide will be a dynamic working resource and there will be changes and additions. The use of a 3 ring binder is suggested to allow for periodic updates.

B. PBC Contracting Concept. The Guide COSS Performance Based contract represents a significant departure from the traditional NASA Cost Reimbursement plus Award Fee contract. Under the performance based contract (PBC) concept, the Government contracts for specific services, not resources. Contractor flexibility is increased and attention is devoted to managing the work. Government oversight is decreased and attention is devoted to managing performance results. The COSS Guide also recommends incorporating a Contractor - Government Partnering process to achieve mutually supportive goals. Quality Assurance evaluation is derived from observation of end services and not from working with the Contractor. Performance Based contracting includes contracting for specific services (Outputs) and may also include contracting for specific end results (Outcomes). The total COSS Guide package includes guidance for both. It contains a COSS Guide for contracting services or tasks and there is also a Statement of Objectives (SOO) Guide that is intended to contract for end results. A Center/Installation has the option of choosing either approach or a combination of both. Regardless of the approach decided upon by any Center/Installation, an Operations Manual is a suggested requirement because there will be many contract management issues common to both methods of contracting.

C. How to use the Operations Guide. The Concept of Operations Guide addresses daily Contract Management issues and is intended to answer the question - "How are we going to manage this contract?". That question encompasses a number of issues that are discussed in the guide. The guide provides example and suggested generic process flows, responsibility and authority matrix, communication flow, etc. Each of these is important to effective contract management; however, each must be tailored to the Center's/Installation's unique contract management structure and preferences. A site specific Concept of Operations Guide is required because each Center/Installation is unique in what form of COSS Contract and contract management organization structure it has selected. Additionally, key player acronyms are often different (Technical Monitor versus QAE, etc). Each Center/Installation also has its unique philosophy about where certain authorities and responsibilities should lie. Tailoring the guide to your specific needs requires a series of facilitated sessions addressing the major issues in the guide. During these discussions, the generic flowchart or matrix is displayed and key players offer suggestions for modifying it. The modified process or other issue decisions are then documented and compiled into a guide format. The right time to develop the Draft Operations Manual is about when the RFP is issued. Further refinements may be necessary after

contract award. Each Center/Installation is encouraged to provide copies of the manual to all key players and then facilitate modifications that suit the Center's/Installation's needs. Once complete, the modified operations manual should be provided to all contract management personnel, including Quality Assurance Evaluators and key customer representatives

II. ORGANIZATION

A. Structure and Relationships. One suggested organization model patterned after the J-BOSC at KSC/45th Space Wing is shown in Exhibit A below, along with its relationship to other key Center/Installation components that support administration of an Operations Support Services Contract. All Centers/Installations interviewed have used their existing organization design when converting to the Performance Based Contract with some modification to reflect a contract management mode while retaining their original technical mode of operation. Additional duties are assigned, particularly in the area of Quality Assurance. Position Descriptions may be modified but grade levels not affected. Daily management of the contract is conducted by the Contracting Officer's Technical Representative (COTR) who in the example above is the Performance Management Office (PMO) Director. At least one other individual is designated to act as COTR in the absence of the COTR.

1. Contracting Officer Office. The Contracting Officer (CO) and the CO 's staff provide Contract Administration. The staff may include contract specialists and procurement clerks. The CO's office awards the contract, issues modifications, certifies invoices for payments, issues change orders and is the official point of contact for formal correspondence with the Contractor.

2. Integrated Product Service Teams (IPT's). The IPT is a matrix organization comprised of both NASA Center/Installation and Contractor personnel representing each of the major functional groupings for contracted work. These teams will be providing support to the COTR with both daily management of the contract and quality assurance functions. The Teams will meet at least monthly to resolve problems and gauge contract effectiveness, but may meet more frequently if issues require prompt resolution.

3. Business Office. The Business Office may provide budgeting support including accounting/cost reporting, capital investment strategies, etc..

4. The Joint Performance Management Office (JPMO) - The JPMO is responsible for overall contract management and administration. It assures appropriate customer service by partnering a relationship with Center/Installation support customers and the Contractor through the IPT's.

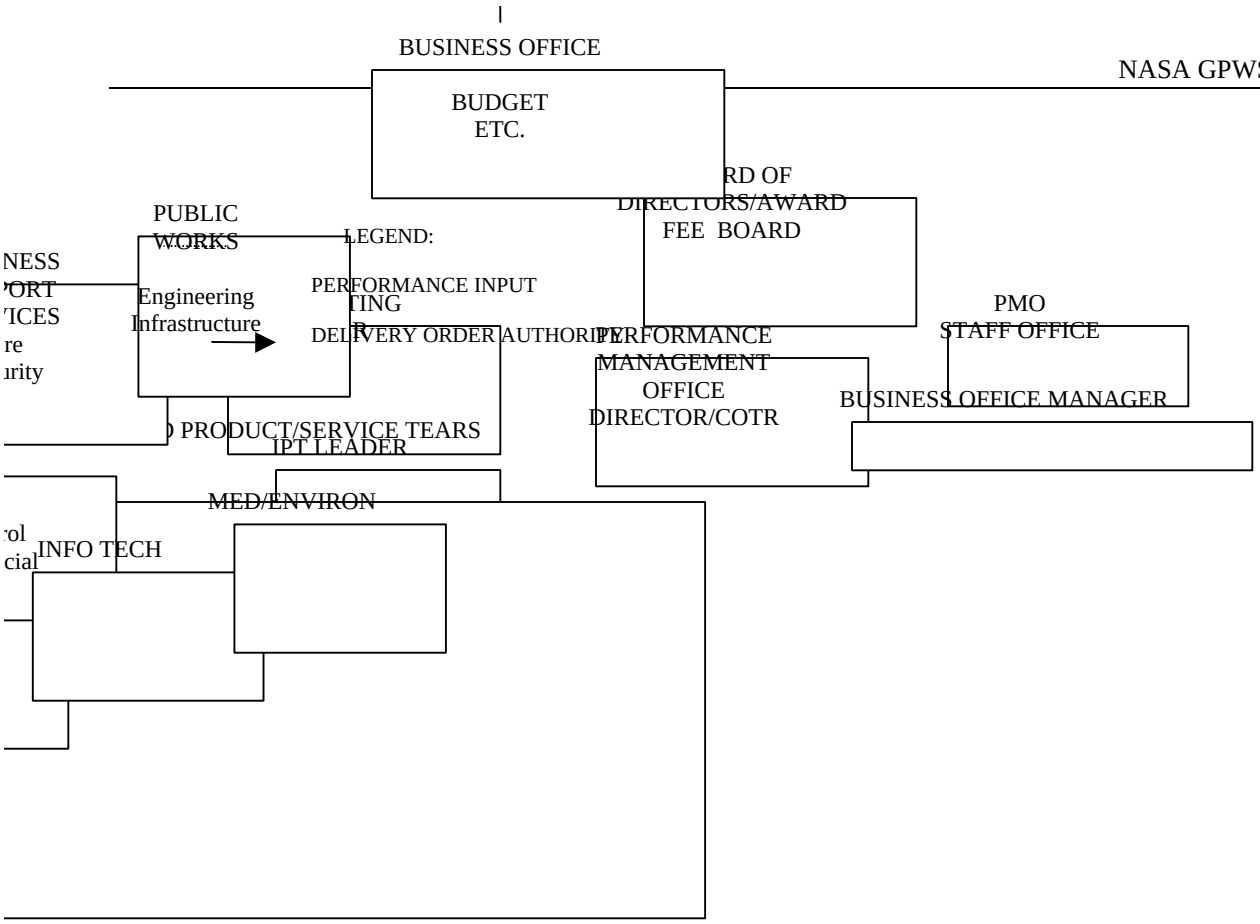


Exhibit A

B. Staffing Requirements. The following factors should be considered in determining required contract management staffing under a PBC specification:

1. Specification Type. What form of specification do you have? In general, the more your specification requires the Contractor to achieve outcomes/results, the less administrative cost there is to the Government. In contrast, if your specification requires providing man-hours (Level of Effort), those man-hours require direction and Government resources. A results oriented specification also requires less Quality Assurance (QA) resources. It is less costly to track trouble call trends and equipment failures than be on site to monitor actual Preventive Maintenance (PM) or Predictive Testing & Inspection (PT&I) work in progress.

2. Current Contract Management Staff and Duties. Construct a simple matrix of the primary functions performed by different personnel under the current level of effort contract operation

approach versus the PBC approach. Estimate the work-years devoted to tasks that will no longer be provided under the PBC approach and where they can be diverted to PBC management and QA. Keep in mind that under the PBC concept there may be some new tasks required as well. What should be reduced is the daily direction given to the Contractor and intensive oversight of contract operations. Increases may be required in more structured QA efforts. A sample matrix is shown below:

Current LOE Versus PBC Contract Requirements Matrix.					
Function:		COTR	QA	Planner	Procurement
1. Work Coordination/ Direction	Current				
	PBC				
2. Work Generation Job Estimating	Current				
	PBC				
3. Job Negotiation	Current				
	PBC				
4. Conflict Resolution .	Current				
	PBC				
5. Quality Assurance	Current				
	PBC				
6. Progress Mtngs	Current				
etc.	PBC				
Add Other Tasks					
Total s	Current	1.0	7.0	2.0	3.0
	PBC	1.0	2.0	3.0	2.0

Exhibit B - Staffing Analysis Matrix

3. Quality Assurance Approach Selected. The QA approach chosen can significantly affect your staffing needs. See both the Output QA Guide and the SOO QA Guide. The more you rely on CMMS data and customer feedback and trend analysis of key metrics, the less QA resources you will need. Full reliance on outcome results tracking for QA is estimated to cost less than 1% of contract value. In contrast, QA resources can run as high as 4% of contract value if traditional monitoring of actual work is used. Realistically, some mix of both work monitoring and outcome tracking is likely and will increase QA costs proportionately.

C. Training Needs. Each Center/Installation must assess its individual training needs for all contract administration personnel based on the standard duties and responsibilities described below and in the proposed appointing letters. Specific training in all phases of the contract process is available from several government and commercial sources.

Position	Warrant Level Training	PBC Basics	COTR Training	QAE Workshop	PBC SOW Development	Standards of Conduct
Contracting Officer	X	X	X	X	X	X
Building Mgr/COTR		X	X	X	X	X
Assistant COTR		X	X	X	X	X
Specification Writer		X			X	
QAE		X	X	X	X	X
P&E		X				X

Exhibit C. - Training Requirements Matrix

III. AUTHORITIES AND RESPONSIBILITIES. Key contract management personnel are assigned the following responsibilities and authorities:

A. Contracting Officer. The Contracting Officer (CO) is appointed by higher authority subject to the limitations contained in the Federal Acquisition Regulations (FAR).

1. Authorities. The C.O. is authorized to make changes to the contract and obligate money on the part of the government (FAR 1.602-1).

2. Responsibilities. In accordance with the specific appointment letter and the authorizations and limitations contained in the FAR, and NASA FAR Supplement.

B. Contracting Officer's Technical Representative (COTR). As stated in the NASA FAR Supplement Part 1842 Section 1842.270, contracting officers may appoint a qualified Government employee to act as their technical representatives in managing the technical aspects of a particular contract. If necessary, the contracting officer may appoint an alternate COTR to act during short absences of the COTR. Technical organizations are responsible for ensuring that the individual they recommend to the contracting officer possesses training, qualifications and experience commensurate with the duties and responsibilities to be delegated and the nature of the contract. NASA Form 1634, *Contracting Officer Technical Representative (COTR) Delegation*, shall be used to appoint COTRs. Refer to the NASA FAR Supplement for specific COTR authorities that may be delegated by a Contracting Officer.

C. Facility Manager. The facility manager is a customer focus position used at many Centers/Installations for the purpose centralizing work requirements generation. The following are possible authorities and responsibilities:

1. Authorities. The Facility Manager may be authorized to:

- Generate work requirements, including work requests and facility trouble calls.
- Coordinate scheduling of facility work with the Contractor's representative.

2. Responsibilities include:

- Coordination of requests for work
- Perform QA evaluation of housekeeping services
- Maintenance and Repair identification, budgeting, work generation and scheduling

D. Quality Assurance Evaluator (QAE). The QAE is appointed as required to assist in evaluating the adequacy of the Contractor's performance under each work requirement in the Schedule of Prices. A COTR may also function as a QAE. The QAE should be appointed in writing for specific contract functions. A sample appointment letter is provided as Attachment A.

1. Authorities. In accordance with a specific appointment letter issued by the CO.

2. Responsibilities. Specific QAE responsibilities are:

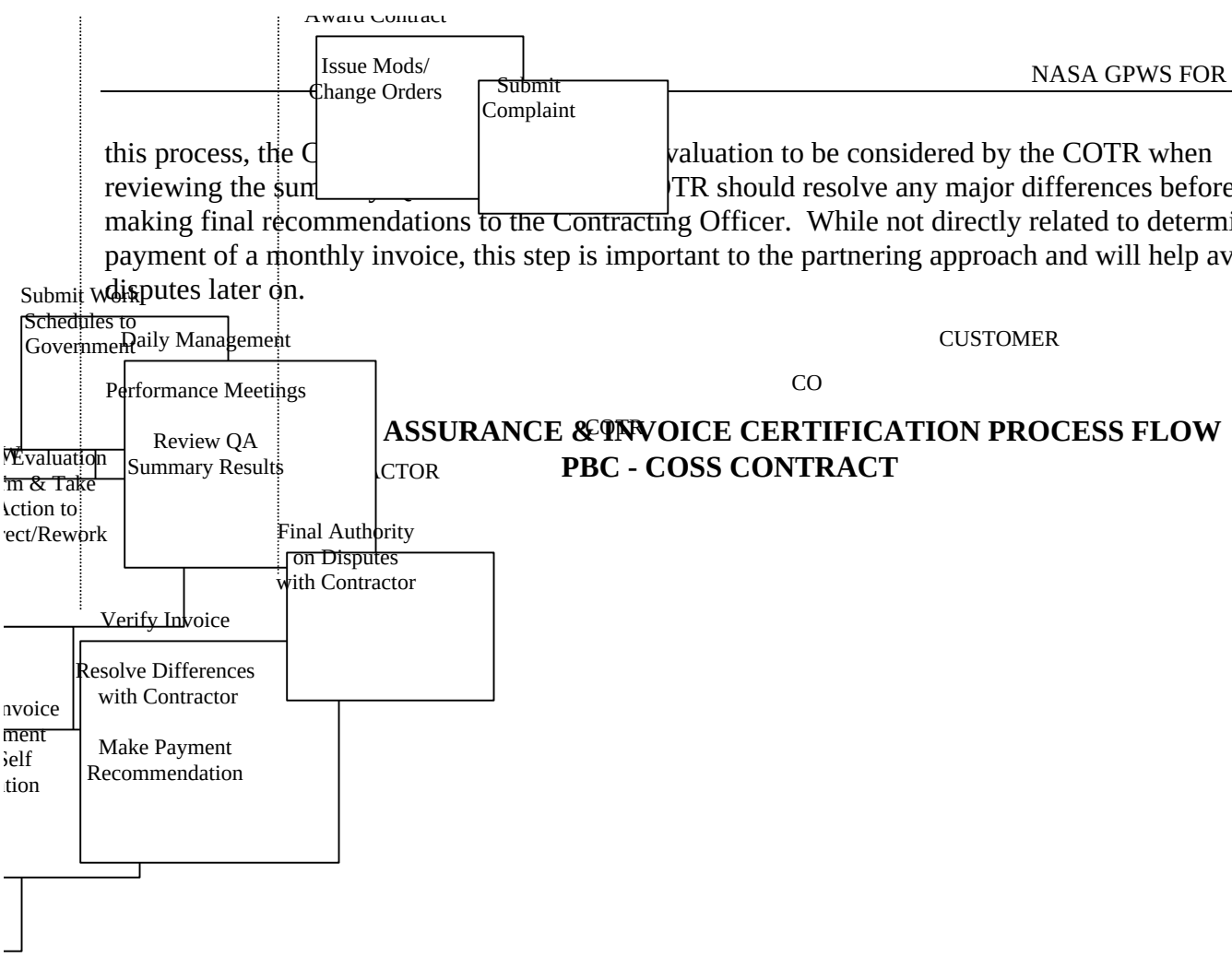
- Accomplishing surveillance required by the contract surveillance plan.
- Completing and submitting to the COTR, inspection reports as required in the contract surveillance plans.
- Recommending to the COTR the verification of satisfactorily completed work, payment deductions, liquidated damages and other administrative actions for poor or non-performed work.
- Assisting the COTR in identifying necessary changes to the contract, preparing Government estimates, and maintaining work files.
- Making recommendations to the COTR regarding changes or revisions to the Performance Work Statement and contract surveillance plan.
- Maintaining accurate and up to date documentation records of inspection results and follow on actions by the Contractor.

E**. Planner & Estimator (P&E).** The primary P&E function is to provide both scoping and detailed work packages when required for negotiating and issuing Delivery Orders to the Contractor. Additionally, the P&E may be asked to estimate the cost of non-performed work if a schedule of prices does not apply. R. S. Means cost data publications will be used whenever possible. If the Center/Installation does not have a person assigned P&E duties, the COTR, or other qualified person may perform the P&E function. It is important to separate the work estimation/negotiation function from the inspection function to avoid a conflict of interest situation. If this is not possible, then the Lead QAE or COTR needs to provide a periodic audit of work packages to verify that the work ordered is the work received. (Also see Standards of Conduct under Paragraph IVF.) Where the P&E is also used as a QAE, the P&E should attend the QAE Training course.

IV. CONTRACT ADMINISTRATION ISSUES

A. Invoice Certification. Exhibit D depicts a QAE and Invoice Certification Process. Note that in

this process, the C valuation to be considered by the COTR when reviewing the sum TR should resolve any major differences before making final recommendations to the Contracting Officer. While not directly related to determining payment of a monthly invoice, this step is important to the partnering approach and will help avoid disputes later on.



ASSURANCE & INVOICE CERTIFICATION PROCESS FLOW
PBC - COSS CONTRACT

Exhibit D - QAE and Invoice Certification Process

The process begins with the QAE(s) preparing inspection plans and schedules based on specification requirements and Contractor submitted work schedules, i.e. where and when will restrooms be cleaned, grass cut, etc. The QAE performs surveillance and validates customer complaints for both fixed price and IDIQ work in accordance with the approved QA plans and documents findings of satisfactory and unsatisfactory work. In some cases, where it is of value to the Government, the

Contractor may be afforded the opportunity to correct unsatisfactory work. The Contractor is asked to sign and acknowledge receipt of all evaluation forms.

The Contractor submits the monthly invoice, along with a self evaluation for that month's work, to the COTR, who checks for accuracy against contract bid schedules and forwards it to the COTR for verification.

The QAEs then forward their monthly summary evaluation data along with recommended payment deductions and assessments of liquidated damages, to the COTR.

The COTR reviews the QAE inputs and the contractor invoice for accuracy and makes a payment recommendation to the CO verifying all or part of the invoice.

The CO will certify and make payment.

B. Contractor Communication. To whom should the Contractor talk to about various issues? Exhibit E is a suggested primary (1), and secondary (2), communication channel for various contract management subjects. Also see the Conflict Resolution discussion in Paragraph IV C.

SUBJECT	COTR	QAE	CO	P&E
Contractor Daily Performance Issues	2	1		
Overall Performance Evaluation	1		2	
Stopping Work	1	2- For Safety		
Work Order Estimates	1			
Work Acceptance	2	1		
Problem Resolution (See Disputes)	1		2	
Routine Information Requests	1		2	
Work Schedules	2		1	
Negotiating IDIQ	1		2	Tech Assist
Modifications			1	

Exhibit E. Communication Matrix

Normal communication such as discussing work schedules or the need for a Contractor to gain access to a space does not require documentation. Other issues such as reaching agreements on interpreting a contract clause or a safety issue will require written records to files and to the Contracting Officer.

C. Conflict Resolution. Conflict may be reduced through either informal in-house government procedures for resolving disputes or through a more formal Partnering agreement between the Government and the Contractor at the start of the contract.

1. Informal Procedures. In the informal process, the government unilaterally decides how and who will be involved in dealing with conflict/dispute issues. Many of the issues identified will be the same as those listed in Exhibit F below, but will lack Contractor input. This guide recommends using the Partnering approach because it results in a jointly produced formal procedure team effort with no winners and losers. In the event the Center/Installation does not choose the formal Partnering process, the following resolution matrices and escalation procedures shown in the Partnering section are still appropriate and useful guides for developing the government/in-house disputes resolution process. The major difference is that there will not be a formal up-front commitment on the part of both parties to act constructively for the success of the contract.

2. Alternate Dispute Resolution. The following sequence of Alternate Dispute Resolution (ADR) methods is provided as a guide, realizing that each Center/Installation must develop its own arrangement with the Contractor as part of the Partnering Agreement. Issues to include in the agreement need to be brainstormed at the partnering workshop. The purpose is to resolve differences at the lowest level:

Type of Dispute	1st Level of Resolution	2nd Level of Resolution	3rd Level of Resolution-Negotiation	4th Level - Mediation	5th Level - Disputes Review Board
Interpretation of Contract Clause	QAE	COTR	C.O.	Mediator	Final
Problem with Contractor Employee	COTR	C.O.		Not an issue for Mediation	NA
Disagreement over quantities (Area, lineal feet, etc.)	COTR	C.O.		Not an issue for Mediation	NA
Disagreement over Sat or Unsat work	QAE	COTR	C.O.	Mediator	Final
Government caused additional cost to Contractor because	COTR	C.O.		Mediator	Final

Exhibit F - Dispute Resolution Matrix

a. First and Second Tier Discussion. At the first and second level, discussion and cooperation occur routinely based on factual data and willingness for compromise. Both parties discuss the issue, present their views and facts and try to reach agreement constructively. This may take the form of short conversations or lengthier problem solving meetings.

b. Negotiation. If the issues cannot be resolved at the first or second level the CO will take a lead role in negotiating the issue further. Unless the issue is urgent, those items requiring negotiation can be scheduled for the Progress Meetings, normally held monthly to coincide with performance evaluation summary data input and Contractor self evaluation.

c. Mediation - This is a more formal step that uses a third party. It is reserved for more complex issues and those that cannot be resolved at the third level. A Contracting Officer that is not involved with this contract may be identified as the mediator for more complex issues unable to be resolved by other means. Although the Partnering agreement developed jointly at each site spells out the details, it is suggested that the parties agree to accept the mediator's decision as final prior to mediation start.

d. Disputes Review Board - This level is reserved for those disputes for which prior decisions have not satisfied both parties and which may involve costly and time consuming litigation. This is a panel of 3 people with one member chosen by the Contractor, one by the Government and these two choose a third member. This should be someone they feel is neutral and not a part of the Contract Management Organization or Contracting Officer staff. This could be a NASA representative or legal staff member within the NASA organization. The Board meets as often as necessary to resolve disputes. The Board's decision is final and binding on both parties.

D. Partnering. The Partnering Process, as described in this Guide, is based upon a mutual commitment between government and industry to work cooperatively as a team to identify and resolve problems and facilitate contract performance. The process is designed to be mutually beneficial, providing the Center/Installation with quality services, on time and at a reasonable price and allowing the contractor to operate efficiently and earn a fair profit. Partnering requires the parties to look beyond the strict bounds of the contract in order to formulate actions that promote their common goals and objectives. It is a relationship that is based upon open and continuous communication, mutual trust and respect, and the replacement of the "us versus them" mentality of the past with a "win-win" philosophy for the future. Partnering also promotes synergy, creative thinking, pride in performance, and the creation of a shared vision for success. Partnering agreements are more than just signatures and handshakes. They represent a willingness to resolve differences in a structured and constructive manner.

Although formal Partnering is most effective for large procurements, the same philosophy and process can be applied successfully on a smaller scale at the Center/Installation.

The four phases of partnering are:

1. Making the commitment to partner. This requires the willingness and support of senior management to empower participants with the required responsibility and authority to make binding decisions. Senior managers must lead the partnering process by reinforcing the team approach to contract administration, breaking down barriers, actively participating in the resolution

of issues escalated to their level, and championing the process. There is an initial investment of participant time to make the process work and some cost in conducting the initial workshop.

2. Communicating with Industry. After commitment is obtained to proceed, the solicitation will contain a clause informing offerors of the Government's desire to use partnering on the contract. A recommended clause for Section L is provided in the User's Guide.

3. Conducting the Workshop and Developing the Charter. The purpose of the workshop is to build a Contractor/Government team and create the momentum that will drive these partners in the same direction toward the successful accomplishment of mutual goals and objectives throughout the contract term. Recommended elements of the initial Partnering Workshop include:

   - Brief Introduction to Partnering Concept - Experiences, Concerns
   - Team building exercise
   - Team Goals - What are we jointly trying to achieve through a Partnering Agreement?
   - How will we accomplish this?
   - What are the issues involved in helping us to realize our goals?
   - What metrics can we track to tell us if the contract is effective and our goals are being met?
   - How will we resolve disputes to avoid hurting each other?
   - What are the specific kinds of disputes that we can think of now? Develop a conflict escalation procedure similar to Exhibit F.
   - Dispute Resolution Board - Discuss need and merit. Decide the Board composition.
   - Developing the Partnering Agreement, signed by all key Contractor and Contract Administration personnel.

   There are no future specific partnering meetings; instead, all future working meetings will be conducted and guided by the principles and pre-set procedures established during the workshop and incorporated in the drafting of the initial Partnering Agreement.

4. Making it Happen After development of the charter it is critical that all actions taken are consistent with the Partnering Agreement objectives. At the monthly progress meetings, periodic checks can be made to gauge how everyone feels about the value of the partnering agreement. If necessary, a follow up workshop may be held to refocus the team on the process and educate new stakeholders.

A sample Partnering Agreement is provided as Attachment B.

E. Progress Meetings. Whether a Partnering Agreement exists or not, progress meetings are an essential element in maintaining a strong cooperative relationship with the COSS contractor and to identify and correct problems early. Meetings should be held monthly to coincide with invoice submissions, although they can be requested whenever there is an indication of a problem or dispute which needs resolution by the COTR. The intent is to identify and address areas for improvement, including the contract administration team-contractor relationship as well as contractor performance. Progress meeting discussion should be based on factual data such as QAE inspection results and customer complaints. More important than specific deficiencies is a continuing review of performance trends in key support areas. A trend analysis and discussion can often identify a problem area before it becomes an unsatisfactory issue. The Progress meeting is conducted using the Partnering Agreement ground rules and philosophy worked out in advance. The meetings should be

chaired by the COTR and be conducted with the discipline of formal agenda items, identified goals and objectives, and clear action items with responsibilities and time frames.

A sample agenda includes:

- Positive feedback by COTR – What went well last month?
- Review of the last meeting action items with an update by the action person.
- Summary QAE input by functional area coupled with a Contractor counterpart self-evaluation.
- Next month's workload plan presented by the Contractor. Discussion should be limited to coordination requirements for the COTR.
- Issues and disputes requiring resolution.
- Trend Analysis - A joint look at some results indicators (Positive and Negative), customer feedback (complaints and praise), and equipment failures.
- How are we doing on following our Partnering commitment? (Team check.)
- Summarize meeting action items and assigned responsibilities.

Exhibit G illustrates the value of the progress meeting as a tool for both daily contract management and to support the award fee decision process.

In the process depicted in Exhibit G below, requirements are stated in terms of high level Outcomes. The proposing Contractors are also given some lower level Objectives (Shown as TTD's or Technical Task Descriptors- similar to the Specific Objectives in this SOO guide). The Contractor develops a Statement of Work (SOW) which is intended to meet standards at both a program level (PS) and at a more detailed level (DS). Contract management and quality assurance takes place daily by the Integrated Product Teams (IPT's) and consists of a partnering process with the Contractor whereby monthly evaluation of outcome trends and work evaluation coupled with some output data is used during progress meetings to determine what needs improvement. For award fee purposes these monthly results are summarized on a semi-annual basis, reviewed by Joint Performance Management Office (JPMO) and given to a Board of Directors/Fee Decision Board where subjective judgements are made to determine a percent (%) award fee decision.

Exhibit G - KSC example of QA support of Daily Management & Award Fee

In this KSC example, daily input from QAEs as well as Contractor self-evaluation input is evaluated by the COTR and relevant issues are brought up at the progress meeting. The monthly input is also fed into the evaluation board for award fee considerations.

F. Award Fee Decisions. The Award Fee is used to encourage and reward the contractor for superior performance in meeting the requirements set forth in the contract, to foster pro-active management, and to promote customer service. The Award Fee may be associated with either a Fixed Price or Cost Reimbursement type of contract. It may also apply to either an output oriented specification or to an outcome-oriented specification. Award fee considerations are discussed in the user's guides. Ultimately, award fee criteria is highly variable and must reflect the importance of those attributes under some control by the Contractor, which are not directly contracted for in the specification.

A sample Award Fee Evaluation Plan is contained in the SOO User's Guide, which may be tailored to include other criteria for award. It also provides a recommended process for arriving at a fee determination. The fee determination will be highly subjective but may be supported by objective quantifiable data. As an example, the Award Fee Board may be provided numeric data on customer feedback evaluation based on a specific rating scale. The board must decide subjectively, how significant that number is relative to a percent (%) of award fee.

Exhibit G above illustrates how the monthly evaluation data from the IPT's and COTR feed into the Award Fee Board. In the case of KSC, this input also includes how well the Contractor is meeting the Statement of Objectives or what KSC calls “Global Outcome Objectives”.

G. Standards of Conduct. A standards of conduct briefing normally is required annually of all Federal employees. The legal staff conducting the briefing should be asked to include a discussion of contract management concerns. Some specific issues follow:

1. Contract Integrity. It is important to separate the ordering function from the inspection function to maintain contract integrity and to avoid any conflict of interest or the appearance of any conflict of interest. The COTR or other technical representative, such as the P&E, who plans and negotiates the work order, must be different from the person inspecting and accepting the completed job. In instances where this is not feasible, the COTR should arrange for a periodic review by an uninvolved person of at least a random sample of some of the subordinate’s work orders and document that ordering and inspection quantities are accurate and valid. The concern is for the potential of fraud and abuse. Even the appearance or opportunity for collusion may cause problems when and if audits are conducted by outside agencies.

2. Personal Behavior. All contract administrative personnel are required to conduct themselves at all times in a manner to avoid any appearance of colluding with the Contractor. Gifts of any size or value are not acceptable and socializing after work hours should be avoided. All contract administrative personnel are required to receive formal Standards of Conduct training through the NASA contracting office annually.

V. WORK MANAGEMENT. The User Guides for both the Output and Outcome PBC specifications discuss work management procedures. What is proposed in this Concept of Operations Guide is the need for identifying post award work management issues and documenting the processes associated with them.

A. IDIQ Work. A sample IDIQ process is shown below: Relevant issues include:

1. Authorization. Who is authorized to issue Delivery Orders? A Delivery Order is a contractual obligation and normally the responsibility of the Contracting Officer. Due to the possible large amount of Delivery Orders that may be generated, it is practical for the Contracting Officer to consider delegating authority to the COTR for issuing Delivery Orders with certain constraints, such as dollar limits.

2. Batching. Can Delivery Order jobs be "batched" under one delivery order? In order to reduce the amount of Delivery Orders to be processed, the CO and COTR may consider grouping jobs and funding them with one delivery order. Payment would be contingent on all jobs being completed, however, and each job would still require its own negotiated price.

3. Negotiation. What is the procedure for negotiation? The CO and COTR need to decide how IDIQ work will be negotiated and who will be involved in that process. In some cases the customer may wish to participate or simply trust the Contracting Office with that process, after approving a scope estimate. A technical representative is often necessary to question the Contractor's arguments and estimates, and a Contracting Officer representative is required to ensure work is within contract

scope and FAR requirements are complied with.

B. Trouble Calls. Trouble call procedures are not complex, but there must be Center/Installation-wide decision and understanding about such issues as:

- Who is authorized to call?
- Will the Contractor be required to check in with the facility or building manager before any work is done in the facility?
- Will the Contractor receive calls directly or will the Government screen calls?
- How will trouble calls be handled after normal work hours?
- If more than one work requirement is called in to the Contractor at the same time for the same location, does it count as one trouble call or two? This is important if you provided historical data from which the Contractor made his fixed price bid. Be sure calls are counted in the same way as your historical data.

C. Work Planning, Budgeting and Cost Accounting. The scope of the fixed price work of the COSS contract represents requirements that have been well quantified in advance. This is predictable work for which funding was available at the time of contract award or option exercised. Funds for the fixed price portion of the contract are obligated at award and cannot be withdrawn without a formal contract modification. The IDIQ provision in the COSS contract represents the capability to perform discretionary work and funds are required to be available only when the task order is issued and in the amount negotiated for the task order. Once issued, the task order is treated as a firm, fixed price contract for that scope of work.

Changes in fixed price requirements should be identified as early as possible and a contract modification negotiated. A cooperative and positive relationship between contractor and the contract administration team will facilitate this process and, where practical, achieve mutually beneficial results. For example, should the need arise for an increased service requirement and additional funds are not available, the contractor may be able to assist with identifying offsetting decreases that would be incorporated in the same modification. It must be emphasized that the Contracting Officer can only make contract changes.

Early identification of IDIQ requirements and joint planning with the contractor will allow better workforce and equipment utilization, often producing more economical and timely results. Open communications between the contract administration team and the contractor can improve planning and scope definition for IDIQ tasks. Although contract IDIQ unit prices are fixed and will be used to negotiate any delivery order, early notice and joint scope definition can produce mutually beneficial outcomes such as:

- Lower cost to the Government from better scope development
- On-time completion from early cooperative planning
- Increased contractor profit from more efficient operation

VI. QUALITY ASSURANCE PROCESS

A. What is our Concept? The QA Guide associated with the PBC COSS Specification package explains the PBC QA concept of *Output* Monitoring. The QA Guide associated with the Outcome

Specification Guide explains the concept of *Outcome* Monitoring. Both of these guides provide sample QA plans. This Operations Guide is more concerned with the procedures and processes that are associated with whatever QA approach is chosen by the Center/Installation. The types of QA decisions that need to be made include:

1. Where (for what functions) do we choose to use Performance Monitoring?

2. Which functions are appropriate for Outcome Monitoring?

3. What are our resource constraints to perform QA?

4. Does our specification or Contractor proposal require an output audit by the Contractor that might reduce our QA requirement?

5. To whom do the QAEs report? Do we need a matrix organization to perform both technical responsibilities and contract management?

6. Will we allow a "grace period" for X months to allow the Contractor to adjust to the new requirements?

7. How will we summarize our data for both evaluating performance and making potential payment deductions?

Some help in answering these questions will come from the User Guides and QA Guides in the COSS Guide package. Once those decisions are made, the Center/Installation needs to document them in its Quality Assurance Plan, QA organization and process flow.

B. Summary Performance Evaluation

1. Summary Performance Evaluation Reporting. A monthly summary of performance will be prepared by the COTR based on input from functional QAEs, customer and occupant feedback and Contractor self evaluation. Performance is discussed monthly with the Contractor at the Progress Meeting. A sample excerpt of a performance evaluation summary is shown in Attachment C. The Center/Installation needs to decide how it wants to capture summary performance data so as to both make monthly payments and possible deductions, and also to allow for feeder information for the Award Fee Board, if applicable.

   The summary provides a snapshot of how well the Contractor is performing on a monthly basis along with recommended deduction amounts by functional area. It also helps identify which areas may require Contractor special attention. For functional areas where the Contractor's performance is well below expectations and improvement has not occurred following discussion with the Contractor, a Contract Discrepancy Report (CDR) may be required to get the Contractor's attention. The CDR is a last resort action and should not be necessary with an effective Partnering process.

2. Capturing Summary Data. A significant post award QA issue is - How will we collect QAE and customer input for both payment decisions and for gauging Contractor performance? The use of a

standardized QAE input data screen offers one possible solution to that problem. JSC has done much to adopt that approach and a sample input screen is shown as Exhibit J. In addition to reducing paperwork and rolling up multiple QAE inputs by contract line item bid, the system also performs most all of the deduction and payment calculations including liquidated damages. Centers/Installations are encouraged to discuss this system with JSC contract managers and consider modified applications for their use.

ATTACHMENT A

SAMPLE QAE APPOINTMENT LETTER

From: !INSERT NAME AND TITLE OF APPOINTMENT OFFICIAL!

Subject: Quality Assurance Evaluator, Appointment of

1. You are hereby appointed as Quality Assurance Evaluator (QAE) for Contract No._____. You should obtain a copy of the applicable contract requirements to allow you to perform your QAE duties.

2. The QAE serves as the eyes and ears of the Government. You will accomplish day to day contract surveillance. Your specific duties include:

a. Accomplishing surveillance required by the Quality Assurance (QA) plans and schedules.

b. Completing and submitting inspection reports (evaluation forms) as required by each applicable QA plan. Inspection reports must be in sufficient detail to clearly show where the Contractor's performance was less than satisfactory and provide adequate back up detail regarding specific discrepancies to support withholding payment from the Contractor.

c. Recommending certification of satisfactorily completed work, payment deductions and other administrative actions for unsatisfactory or non-performed work.

d. Assisting in identifying necessary changes to the contract, preparing Government estimates, approving submittals and maintaining work files.

e. Promptly furnishing any requests for change, deviation, or waiver received from government or Contractor personnel.

f. Making recommendations regarding changes or revisions to the QA plans that will improve QA efforts of the Center/Installation.

3. You have no authority to allow deviations from contractual requirements. You have no authority to direct or interfere with the Contractor's performance methods or to issue instructions directly to any Contractor personnel, unless the methods being used present an immediate safety hazard. You are not to issue any instructions that could constitute a contractual change. You are not to tell the Contractor how to perform. If doubt exists as to whether information to be furnished falls within the contract's scope of work, contact either the COTR or Contracting Officer prior to transmitting the information to the Contractor. In evaluating the Contractor's performance, your function is surveillance, not supervision.

4. You are required to satisfactorily complete training in Quality Assurance techniques as well as PBC SOW development and Standards of conduct within three (3) months of your appointment.

5. You are required to acknowledge receipt of this appointment by signing below and returning the original to the appointment official for retention in contract files. Your signature also serves as certification that you have read and understand the contents of this appointment letter. You should retain a copy for your files.

Typed name of appointment official

Signature of appointment official

Date

Typed name of QAE

Signature of QAE

Date

ATTACHMENT B

Sample Partnering Agreement

!INSERT NAMES OF PARTIES! are committed to achieving shared goals and objectives for providing quality facilities support services through this Partnering Agreement. Partnering represents our mutual desire to:

Work as a team in harmony and cooperation

Communicate openly and honestly

Raise concerns immediately

Resolve conflicts at the lowest level possible

Eliminate paperwork and written communication

Recognize the contributions that each member of our team makes

We seek to achieve a quality work product, delivered on time and within budget so that we can proudly say that we are supporting the continuous improvement of !INSERT CENTER OR INSTALLATION NAME! capability to execute its mission.

Conflict Escalation procedures: (Show as Attachment to the agreement - Similar to the Matrix in Exhibit F.)

Escalation guidelines:

1. When a disagreement surfaces, the individuals involved should mutually set a time frame to resolve the issue. If they cannot come to closure on that issue within the set time frame, they MUST escalate the issue with the facts.

2. If the individuals cannot reach agreement on a time frame for resolution, they must escalate the issue.

3. Any issue/disagreement that has a direct impact on the Center/Installation operation should be escalated immediately.

Partnering Agreement
CFM Contract

Signed by the Parties

ATTACHMENT C

SAMPLE MONTHLY PERFORMANCE AND PAYMENT SUMMARY

	Quantity Inspected	No. Unsats	MADN	CDR Y/N	Payment Deductions	Rating S/U

QA Plan #1 - MANAGEMENT SERVICES

Work Control

CMMS Management

Annual Work Plan

QA Plan #2 - OPERATIONS, M&R

Trouble calls

Service Orders

Perform O, M&R Plan

QA Plan #3 - NON-RECURRING WORK

Complete Task Order Requirements, ETC.

CONTRACTOR'S OVERALL PERFORMANCE FOR THE MONTH: UNSATISFACTORY / SATISFACTORY

QAE _____ DATE_____

NOTES : -

CDR is Contract Discrepancy Report

MADN - Maximum Allowable Defect Number - Why Define here? - They are fully discussed in all the other documents?